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JUNE — NOVEMBER, 1938

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Notice to Teachers.

Attention is drawn to the fact that the present booklet combines programmes for both second and third terms, so that no other booklet will be issued this year. For 1939 it is proposed to issue one booklet at the beginning of the year. This, it is hoped, will enable teachers to adjust their schemes so that they may get the full advantage of the radio lessons.

It is to be noted that in future a period of twenty minutes is to be allotted to the music lesson. For other lessons the time will remain at fifteen minutes.

Summary of Lessons and Talks.

Note.—First talk, 1.30 p.m.—1.45 p.m.; second talk, 1.50 p.m.—2.10 p.m.; third talk, 2.15 p.m.—2.30 p.m.

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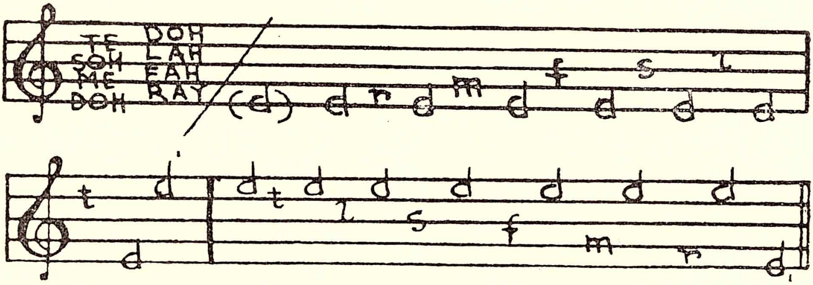
Music.

By Mr. Ramsay Howie.

LESSON 1. June 7—

Sol-fa Pattern: The zig-zag.



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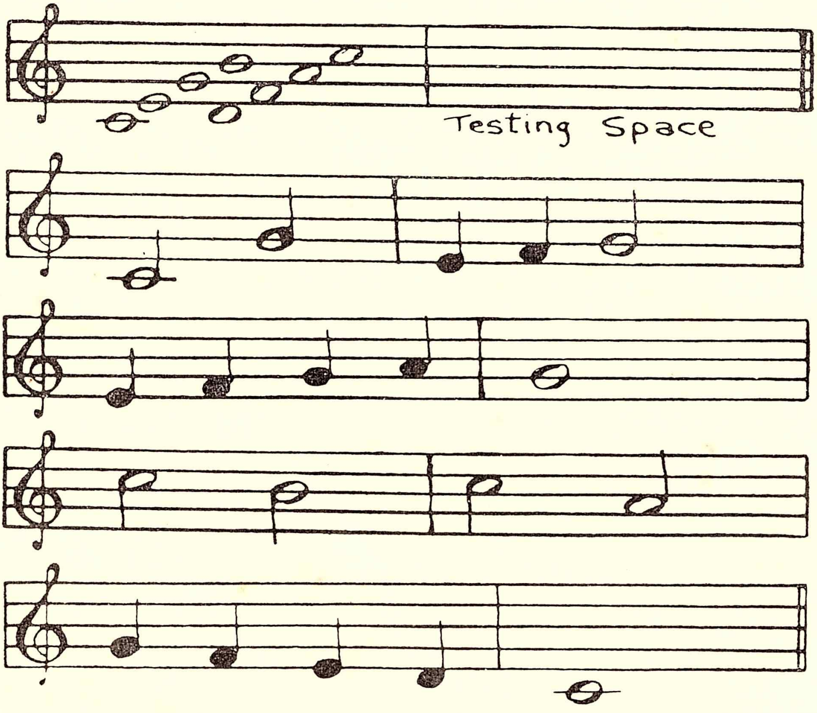
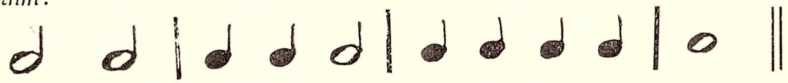
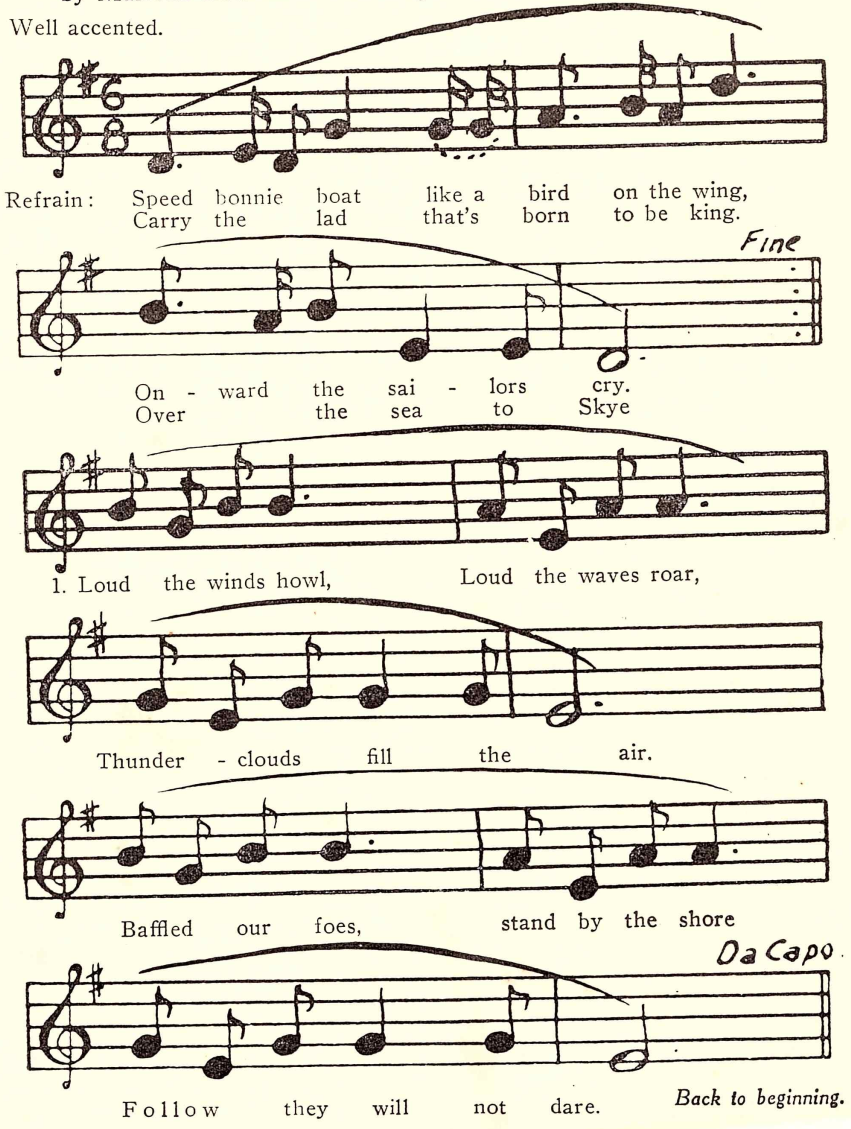


Rhythm:



Song: "SKYE BOAT SONG." (Old Highland Rowing. Measure arranged by Malcolm Lawson. Words by Harold Boulton).


Well accented.
Refrain: Speed bonnie boat like a bird on the wing,
Carry the lad that's born to be king.
Fine
On - ward the sai - lors cry.
Over the sea to Skye
1. Loud the winds howl, Loud the waves roar,
Thunder - clouds fill the air.
Baffled our foes, stand by the shore
Da Capo
Follow they will not dare.
Back to beginning.

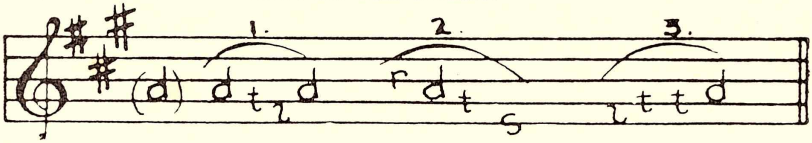
2. Though the waves leap,
Yet shall ye sleep,
Ocean's a royal bed.
Rocked in the deep
Flora will keep
Watch o'er thy weary head.

3. Many's the lad
Fought on that day
Well the claymore did wield.
When the night came
Silently lay
Dead on Culloden's field.

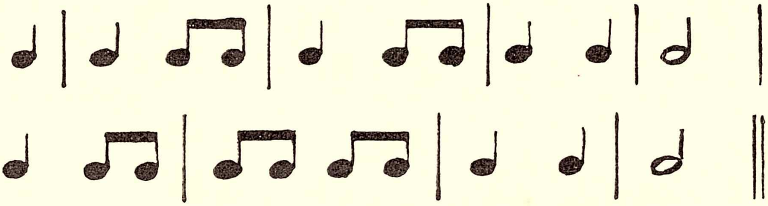
4. Burned are our homes;
Exile and death
Scatter the loyal men.
Yet ere the sword
Cool in the sheath
Charlie will come again.

LESSON 2. June 14—

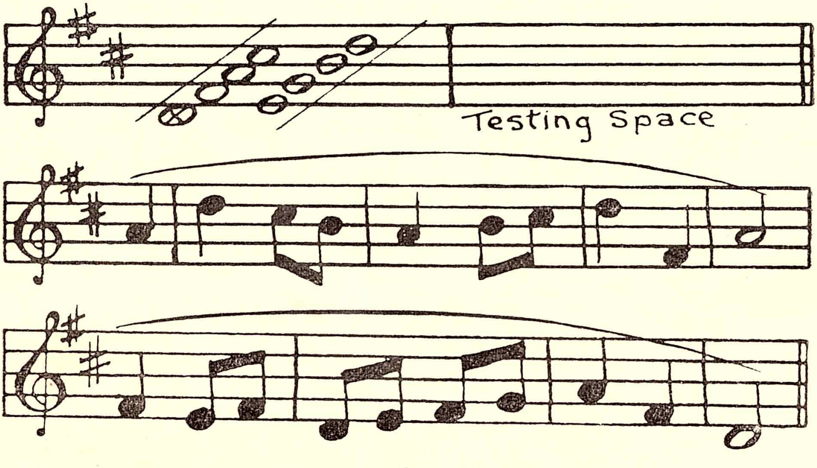
Sol-fa Tune: "ALL THROUGH THE NIGHT."



Rhythm:

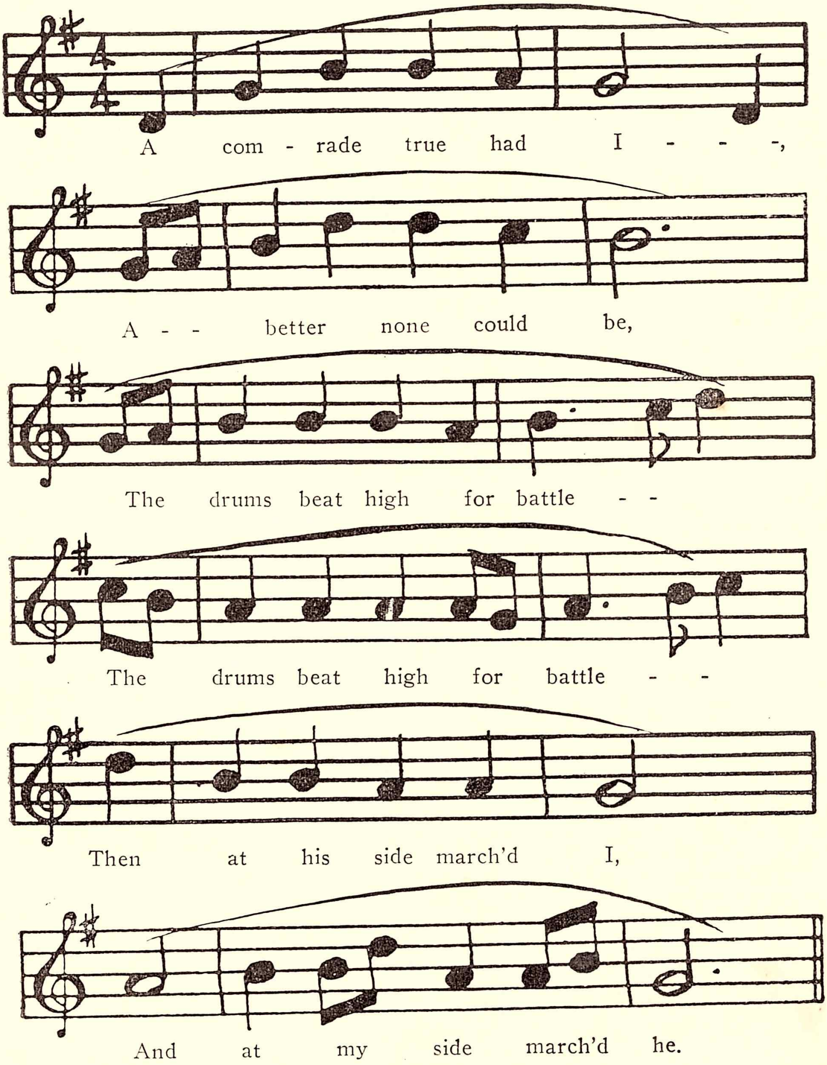


Reading:



Song: “The Good Comrade.”

In strict march time.

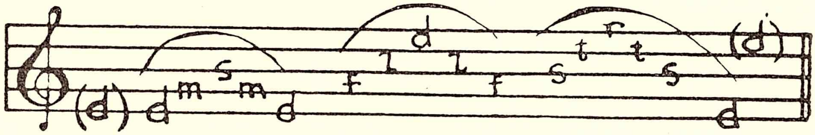

A com - rade true had I - - -,
A - - better none could be,
The drums beat high for battle - -
The drums beat high for battle - -
Then at his side march’d I,
And at my side march’d he.

2. A cruel shot comes flying.
“Is it for me or thee?”
Oh, him it strikes—my comrade.
Good brother, strong companion.
Alas, unharmed am I
While at my feet lies he.

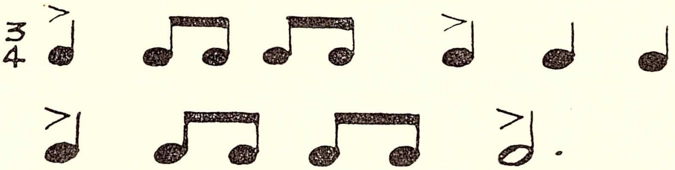
3. He tries to grasp my hand,
But foes encompass me.
“My hand I cannot give thee now
But my good comrade ever thou
In all eternity,
In all eternity.”

LESSON 3. JUNE 21—

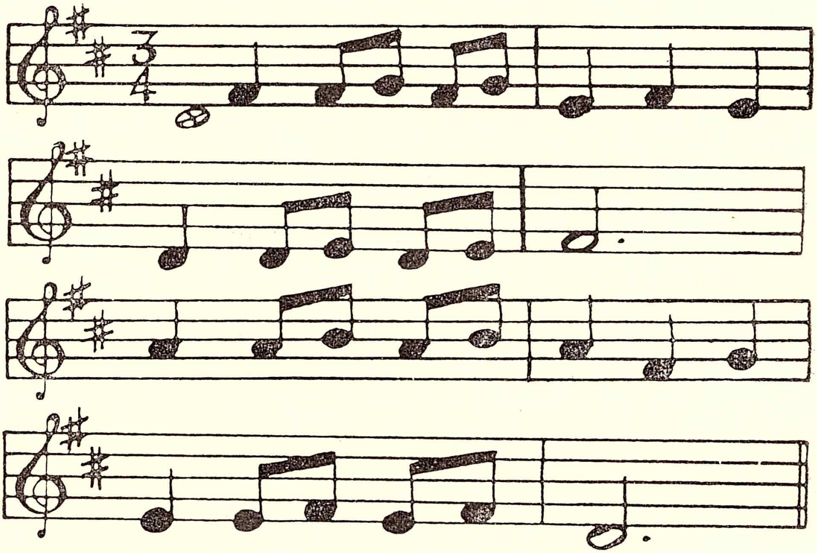
Sol-fa Pattern: “THE HILLS.”



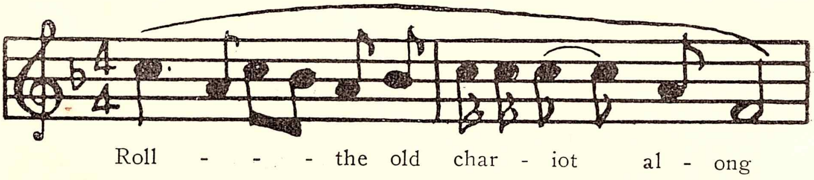
Rhythm:

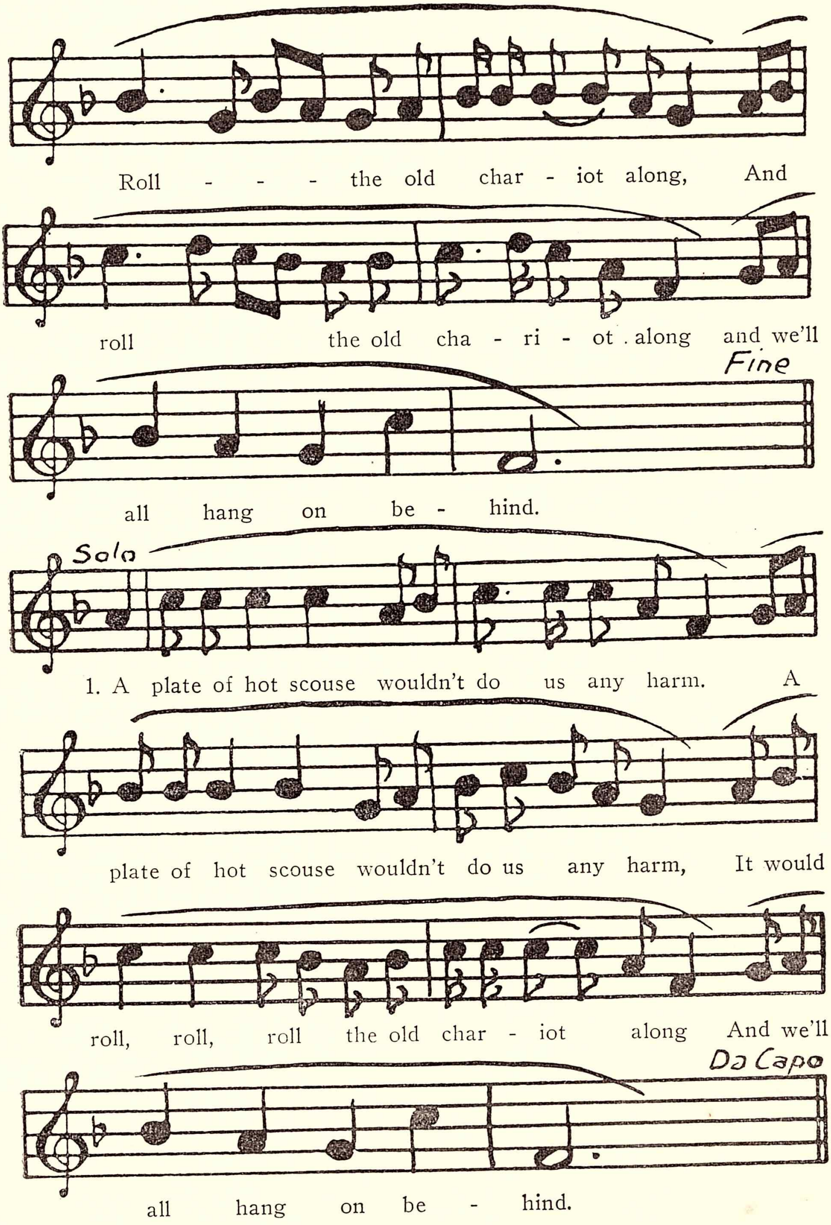


Reading:



Song: “THE OLD CHARIOT.” (Sea Shanty from Lancashire).
In march time.




Roll - - - the old char - iot along, And
roll the old cha - ri - ot . along and we'll
Fine
all hang on be - hind.
Solo
1. A plate of hot scouse wouldn't do us any harm. A
plate of hot scouse wouldn't do us any harm, It would
roll, roll, roll the old char - iot along And we'll
Da Capo
all hang on be - hind.

2. Some fresh sea-pie wouldn't do us any harm.
3. A new plum-duff wouldn't do us any harm.

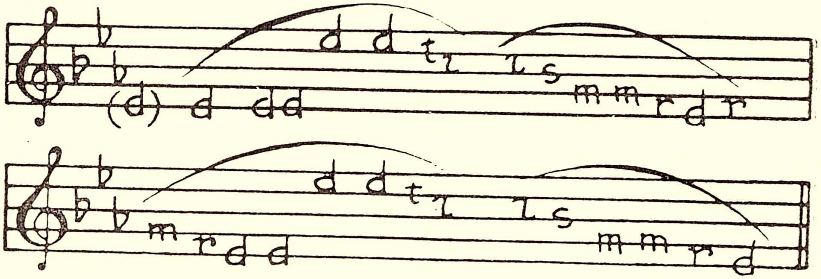
LESSON 4. June 28—

Revision of Sol-fa Tune and Sol-fa Patterns.

Revise: “Skye Boat Song”
“The Good Comrade”
“The Old Chariot”

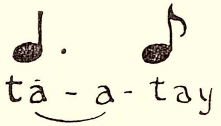
LESSON 5. July 5—

Sol-fa Tune: “ANNIE LAURIE.”

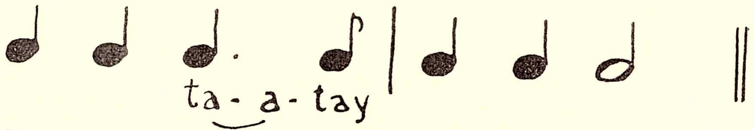


Rhythm: Say and clap the rhythm of the reading exercise below—

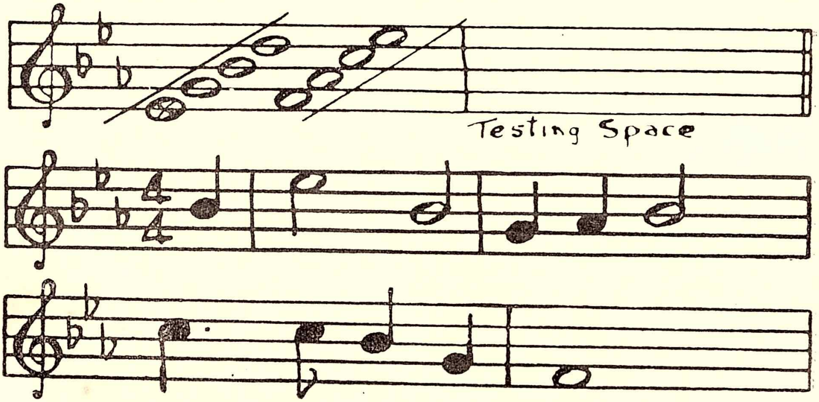
Learn:

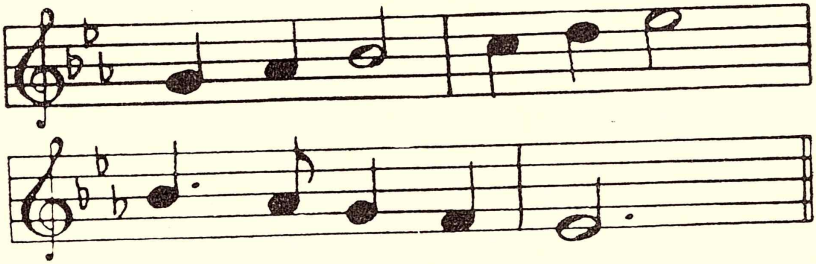


Say:

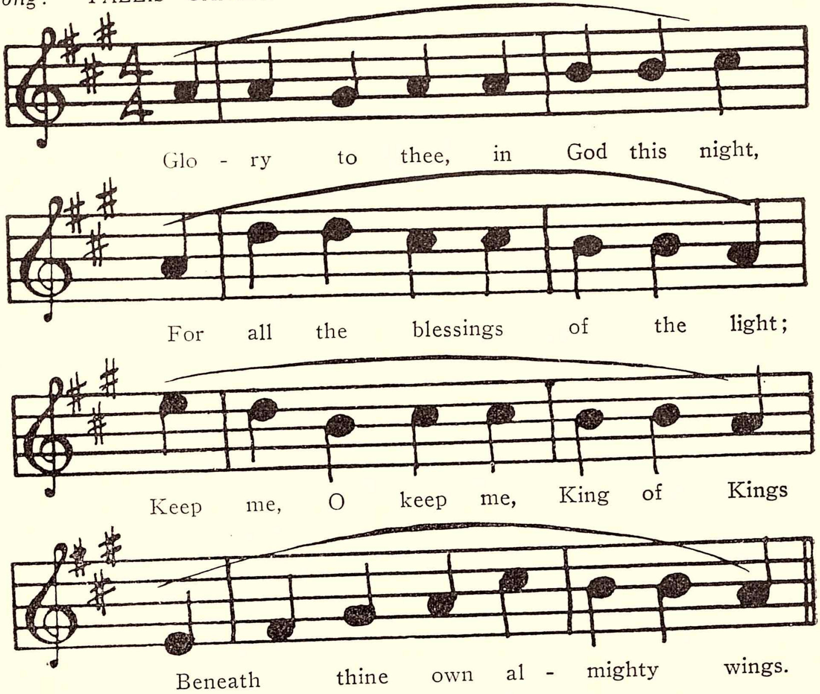


Reading:





Song: " TALLIS' CANON."


Glo - ry to thee, in God this night,
For all the blessings of the light;
Keep me, O keep me, King of Kings
Beneath thine own al - mighty wings.

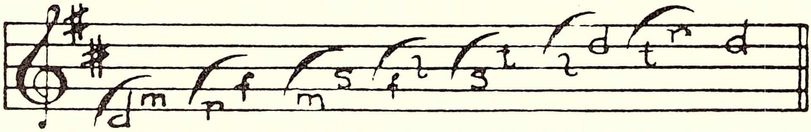
2. Oh may my soul in Thee repose,
And may sweet sleep mine eyelids close.
Sleep that shall me more vigorous make
To serve my God when I awake.

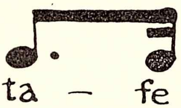
3. If in the night I sleepless lie
My soul with heavenly thoughts supply.
Let no ill dreams disturb my rest,
No powers of darkness me molest.

4. Praise God from whom all blessings flow,
Praise Him all creatures here below,
Praise Him above, ye heavenly host,
Praise Father, Son, and Holy Ghost.

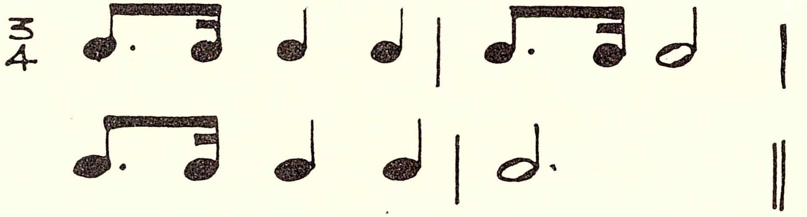
LESSON 6. July 12—

Sol-fa Pattern: " THIRDS."

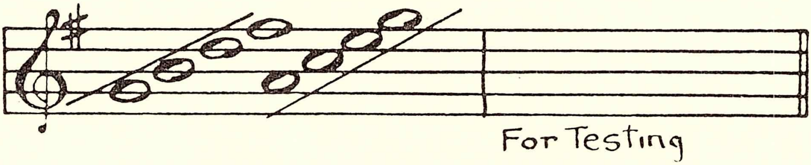


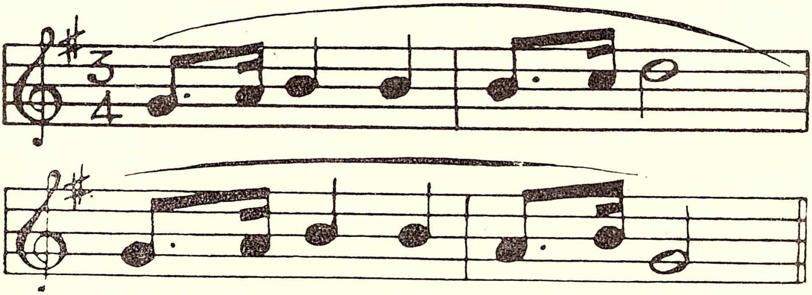
Rhythm: Skipping in music is written like this 

and it is really a longer note followed by a much shorter one. Say and clap this rhythm exercise.

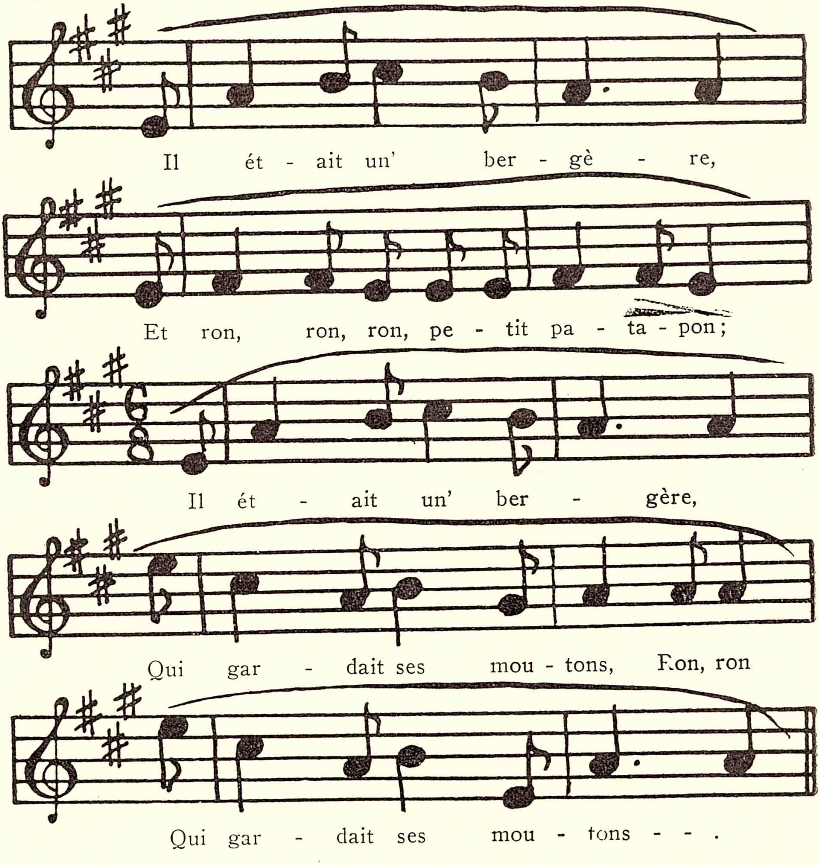


Reading:





Song: “IL ÉTAIT UNE BERGÈRE.” (There was a little shepherdess).

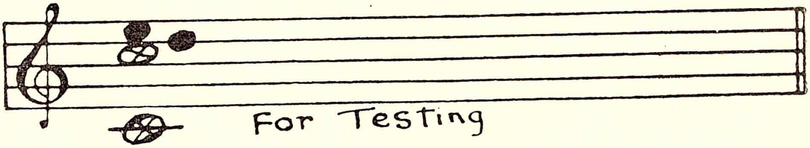

Il ét - ait un' ber - gè - re,
Et ron, ron, ron, pe - tit pa - ta - pon;
Il ét - ait un' ber - gère,
Qui gar - dait ses mou - tons, Ron, ron
Qui gar - dait ses mou - tons - - .

LESSON 7. July 19—

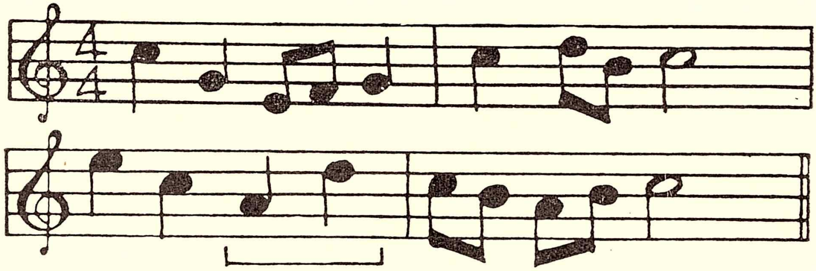
Sol-fa Work: Revise “ANNIE LAURIE” and the “THIRDS” pattern.

Rhythm: Say and clap the rhythm of your reading exercise.

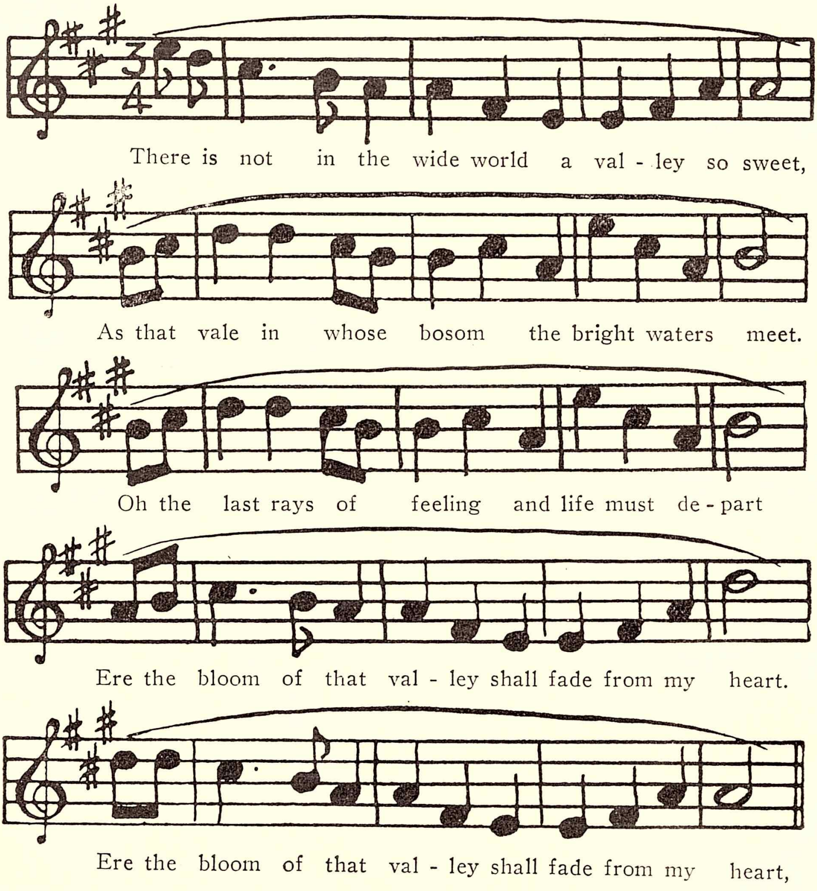
Reading: I think it is time to begin doing without the ladder.



For Testing



Song: "The Meeting of the Waters." (Irish melody. Poem by Moore.)


There is not in the wide world a val - ley so sweet,
As that vale in whose bosom the bright waters meet.
Oh the last rays of feeling and life must de - part
Ere the bloom of that val - ley shall fade from my heart.
Ere the bloom of that val - ley shall fade from my heart,

2. Yet it was not that Nature had shed o'er the scene
Her purest of crystal and brightest of green;
'Twas not her soft magic of streamlet or hill.
Oh no, it was something more exquisite still.

3. 'Twas that friends, the beloved of my bosom, were near,
Who made every dear scene of enchantment more dear,
And who felt how the last charms of Nature improve,
When we see them reflected from looks that we love.

LESSON 8. July 26—

A lesson about quartettes (4-part singing or playing).

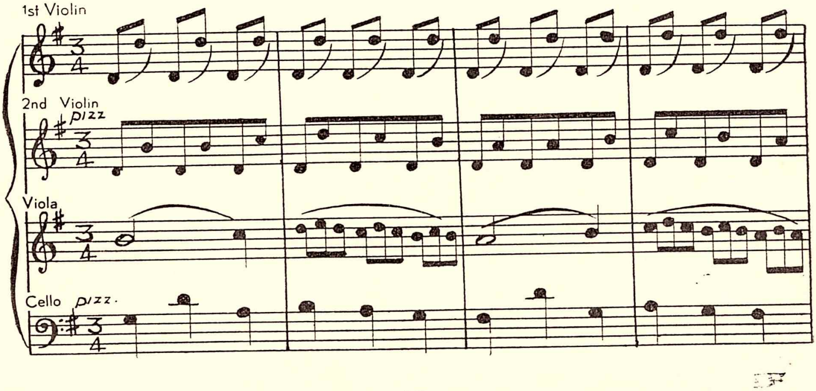
A vocal quartette (4 singers).

An instrumental quartette (4 instruments).

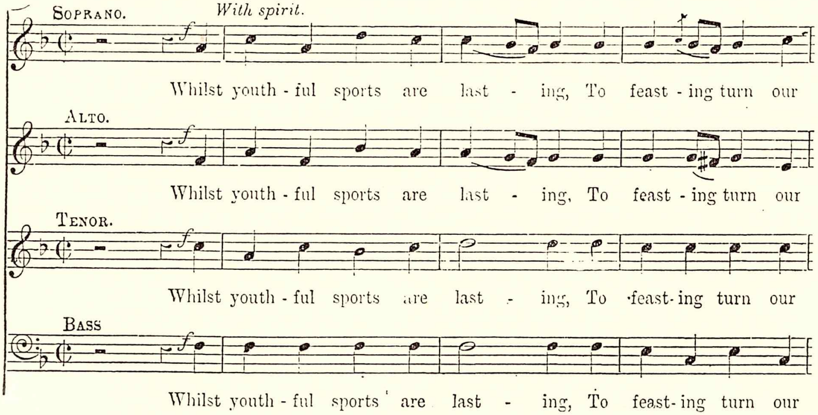
In this lesson we should also have time to sing some of last term's songs. Will you have your last term's booklet handy. Of course, it is best to be able to sing from memory, because, for one thing, you can then sing at home or anywhere else without a book; and, for another thing, people sing better with their heads up instead of bent forward over a book.

Some pieces of quartette music for you to follow with your pencil.

1. STRING QUARTETTE.



2. Vocal Quartette.


Soprano.
With spirit.
f
Whilst youth - ful sports are last - ing, To feast - ing turn our
Alto.
f
Whilst youth - ful sports are last - ing, To feast - ing turn our
Tenor.
f
Whilst youth - ful sports are last - ing, To feast-ing turn our
Bass
f
Whilst youth - ful sports are last - ing, To feast-ing turn our

LESSON 9. August 2—

The best kind of test is one that shows the pupil himself, rather than someone else, how he is getting on with his lessons.

To-day I shall give you a little test to show you whether you are getting on well with these music lessons, or not so well.

Here are ten numbers with places for you to write the answers. Do not try to do anything until the day of Lesson Nine, because I have made the questions so that you will not understand them until I read them out to you.

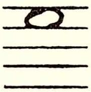
1. Fah? Me? Lah?

2. The middle note is ....?

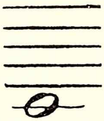
x x x x
3. d d r s. Write names of notes underneath the crosses.

4. d r m f s l t d.

5.



6.



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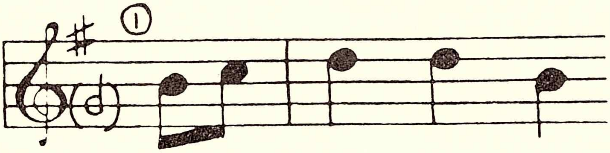
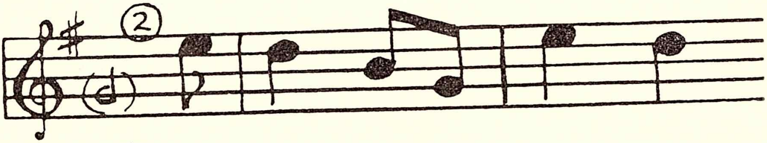
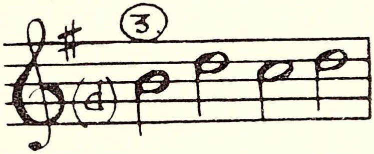
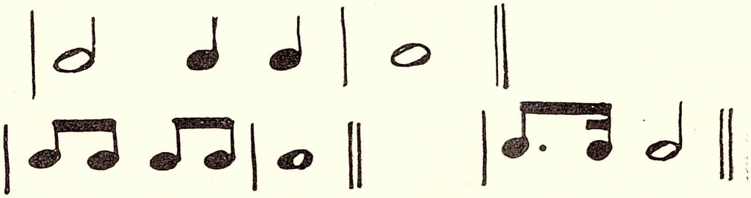






8.

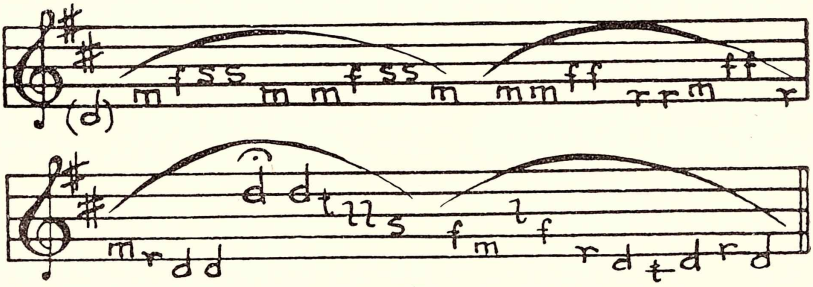


9. Record No. I. Record No. II.

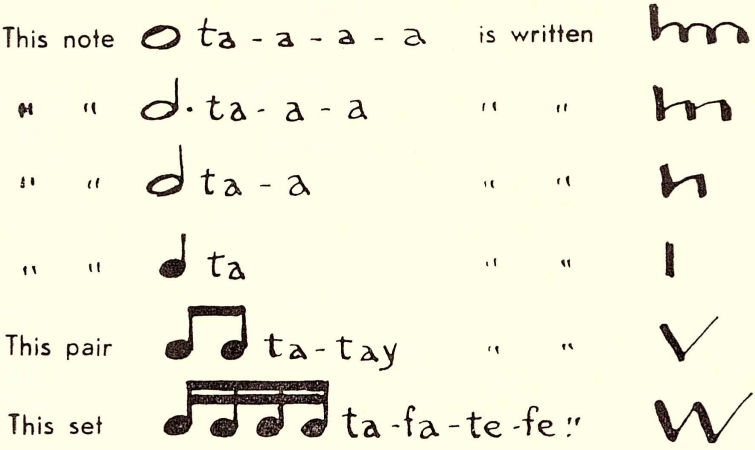
10. 1. To stiffen your neck.
2. To sound the consonants sharply (b, t, k, etc.)
3. To sing as loudly as possible.
4. To sing the vowels clearly (ah, ay, oo, etc.)

LESSON 10. September 13—

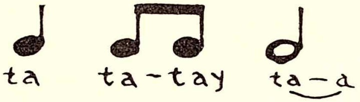
Sol-fa Tune: " JOHN PEEL."


(d)
m f s s m m f s s m m m f f r r m f f r
m r d d d d t l l s f m l f r d t d r d

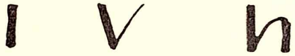
Rhythm: Here are a set of shorthand signs you may use when you want to write a piece of rhythm very quickly.


This note ta - a - a - a is written
" " ta - a - a " "
" " ta - a " "
" " ta " "
This pair ta - tay " "
This set ta - fa - te - fe " "

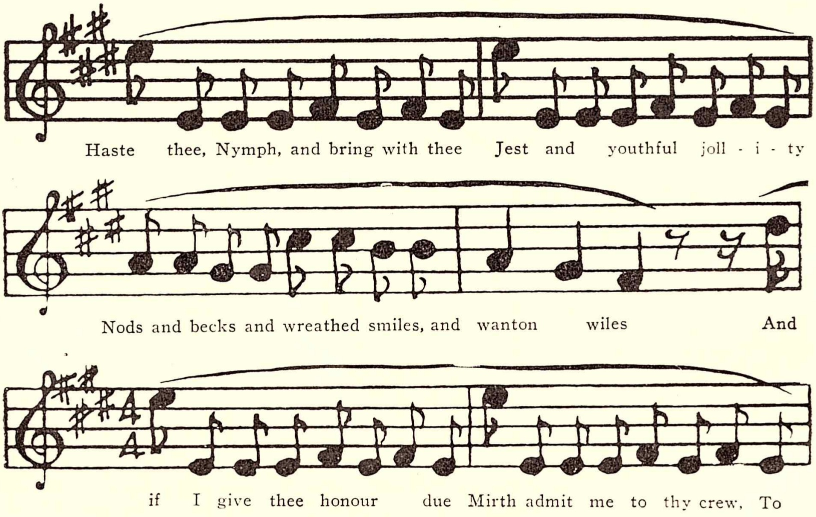
If, therefore, we wanted to write this piece of rhythm,

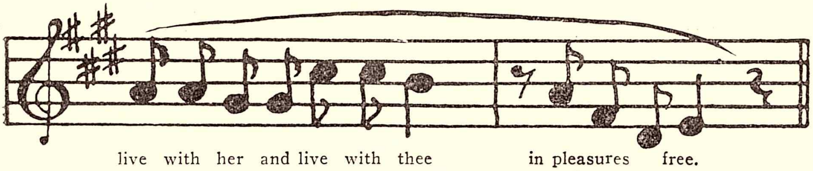


we would put it down like this:



Song: " HASTE THEE, NYMPH." (Haydn, adapted by Robert McLeod. Words adapted from Milton's " L'ALLEGRO.")

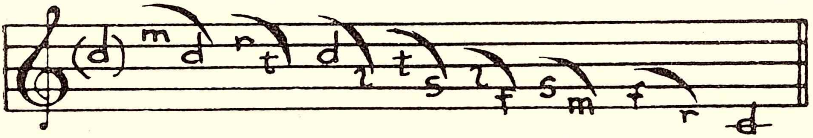

Haste thee, Nymph, and bring with thee Jest and youthful joll - i - ty
Nods and becks and wreathed smiles, and wanton wiles And
if I give thee honour due Mirth admit me to thy crew, To



2. To hear the lark begin his flight,
And singing startle the dull night
From his watch-tower in the skies
Till dawn appear.
Come and trip it as you go,
On the light fantastic toe,
And in thy right hand lead with thee,
Sweet Liberty.

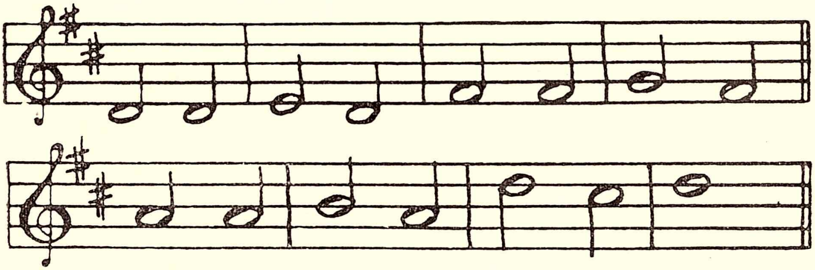
LESSON 11. September 20—

Sol-fa Pattern: " THIRDS." (downward).

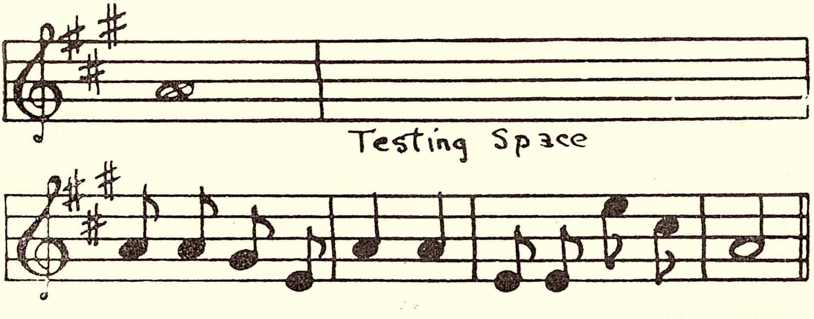


Rhythm: A little dictation exercise.

Reading:
Exercise 1—

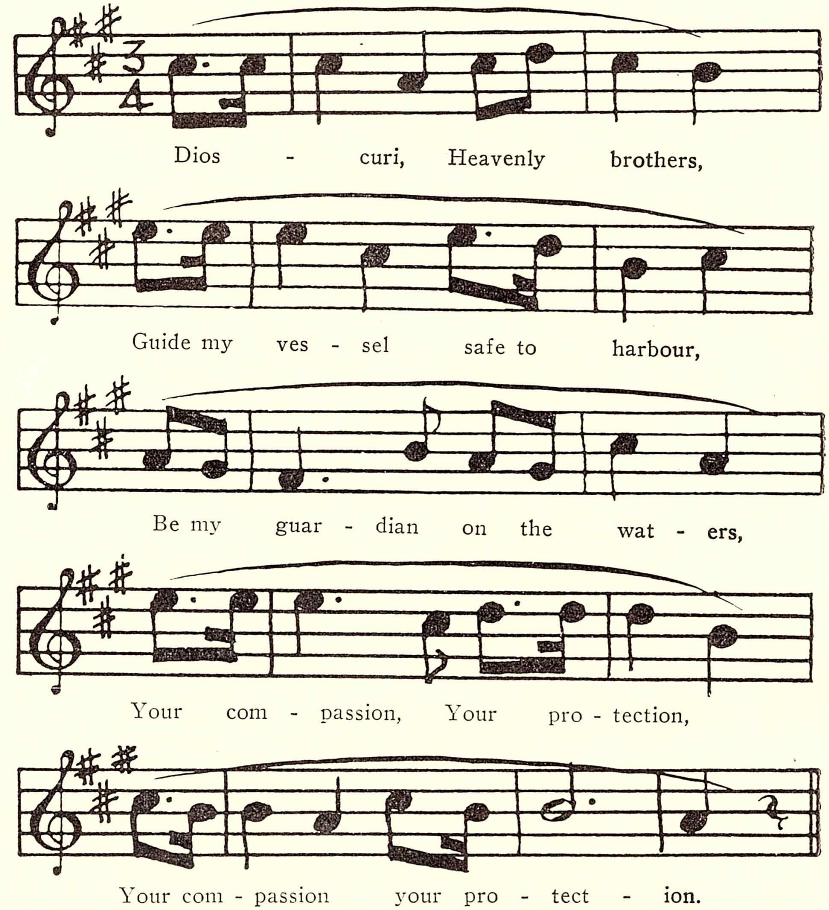


Exercise 2—



Testing Space

Song: "SONG OF THE FISHERMAN TO THE TWIN STARS"—Dioscuri (Franz Schubert).


Dios - curi, Heavenly brothers,
Guide my ves - sel safe to harbour,
Be my guar - dian on the wat - ers,
Your com - passion, Your pro - tection,
Your com - passion your pro - tect - ion.

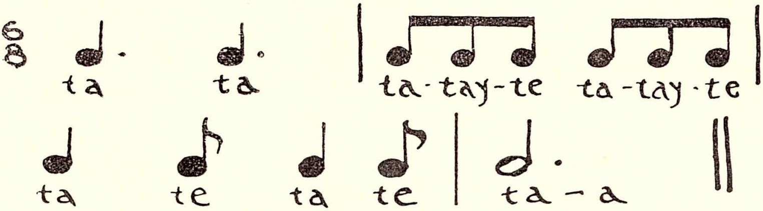
2. He who to himself sufficing
Undismayed the storm encounters,
Leaves himself 'neath your protection
Doubly brave and doubly blessed.

3. This my rudder, which unswerving
Sets the course through wind and weather,
Will I hang when safe in harbour
On the altar in your temple
Dioscuri, Heavenly Brothers.

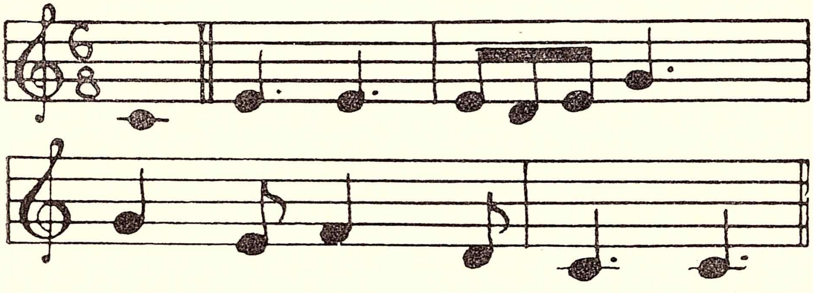
LESSON 12. September 27—

Sol-fa Pattern: *Revise last week's.*

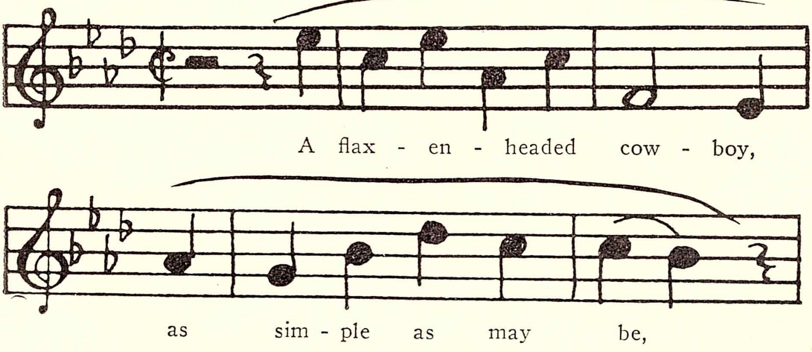
Rhythm: When you see $\frac{6}{8}$ at the beginning of a piece of music, you will find rhythm of a slightly different kind from what we have had. Instead of ♩ and ♫ (etc.), you will find ♪♪♪ and ♩. (etc.), so let us learn some new rhythm sounds.

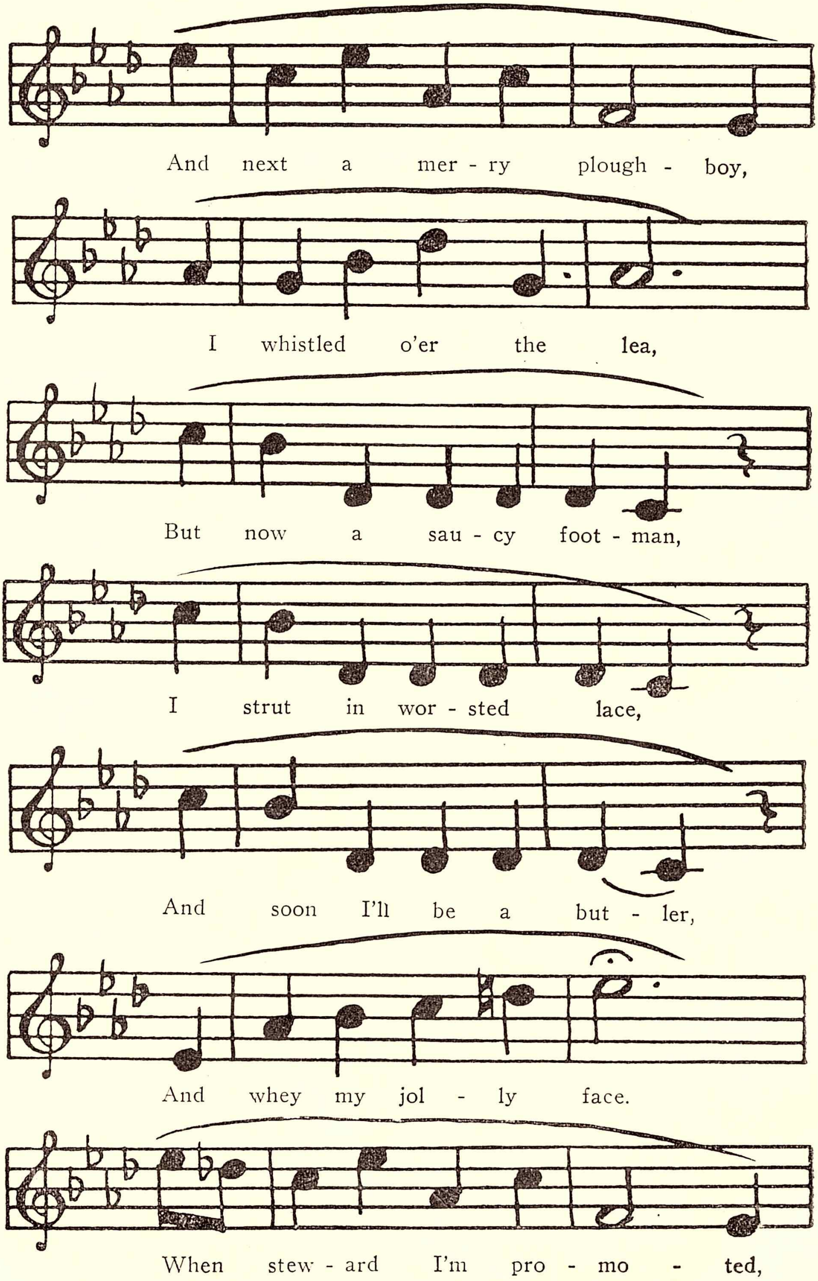


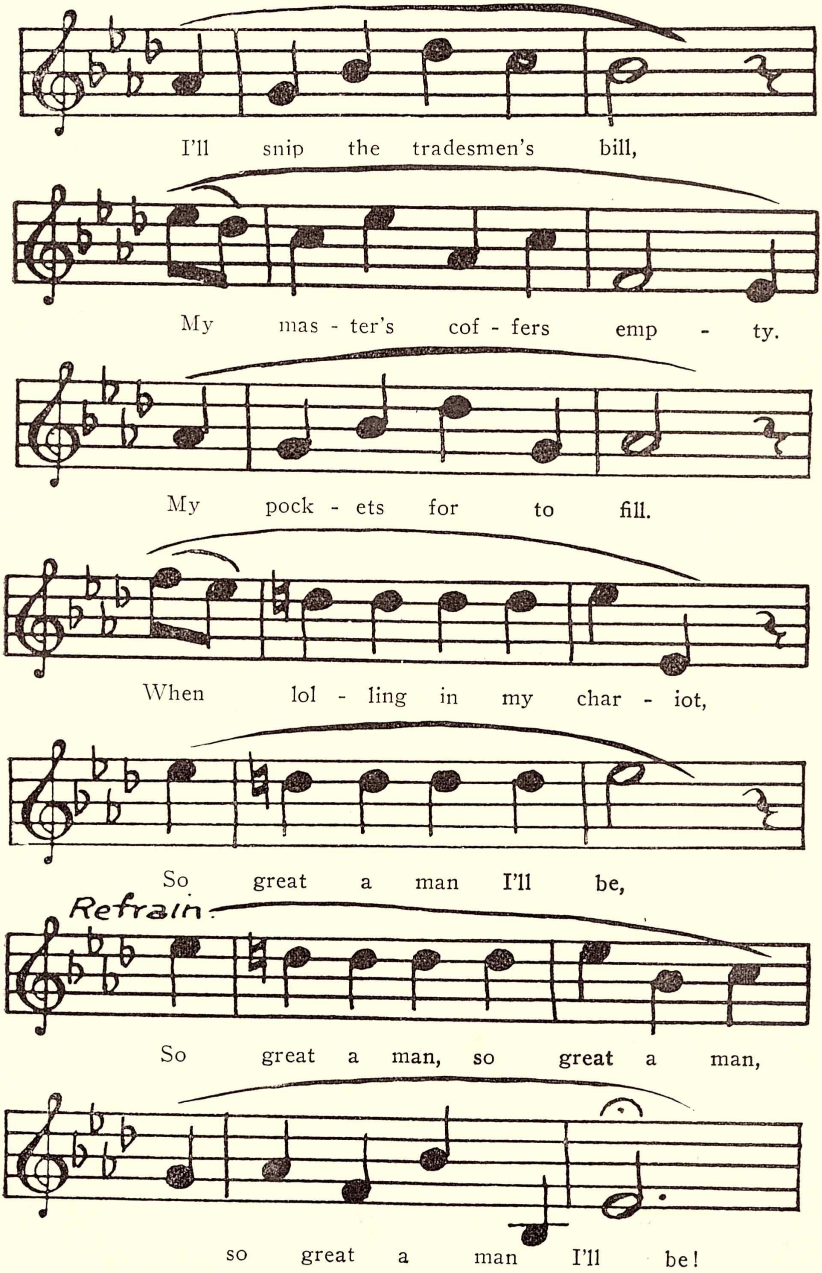
Reading:

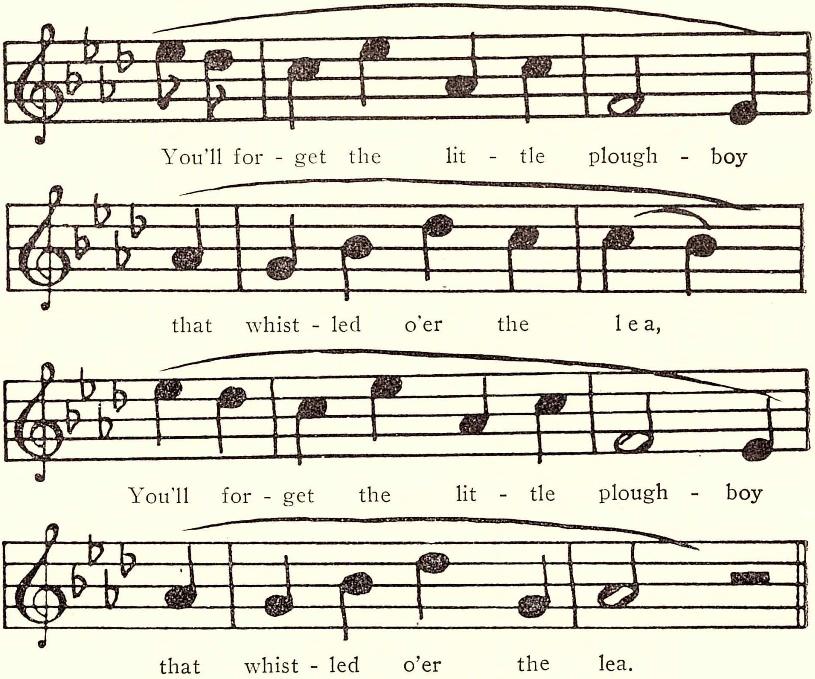


Song: "The Ploughboy." (William Shield. From "Clarendon Song Book III.").




And next a mer - ry plough - boy,
I whistled o'er the lea,
But now a sau - cy foot - man,
I strut in wor - sted lace,
And soon I'll be a but - ler,
And whey my jol - ly face.
When stew - ard I'm pro - mo - ted,


I'll snip the tradesmen's bill,
My mas - ter's cof - fers emp - ty.
My pock - ets for to fill.
When lol - ling in my char - iot,
So great a man I'll be,
Refrain
So great a man, so great a man,
so great a man I'll be!


You'll for - get the lit - tle plough - boy
that whist - led o'er the lea,
You'll for - get the lit - tle plough - boy
that whist - led o'er the lea.

2. I'll buy votes at elections, but when I've made the pelf,
I'll stand poll for the parliament and then vote in myself;
Whatever's good for me, sir, I never will oppose:
When all my "ayes" are sold off, why then I'll sell my "noes."
I'll joke, harangue, and paragraph,
With speeches charm the ear,
And when I'm tired on my legs,
Then I'll sit down a peer.
In court or city honour,
So great a man I'll be.

Etc., etc.

LESSON 13. October 4—

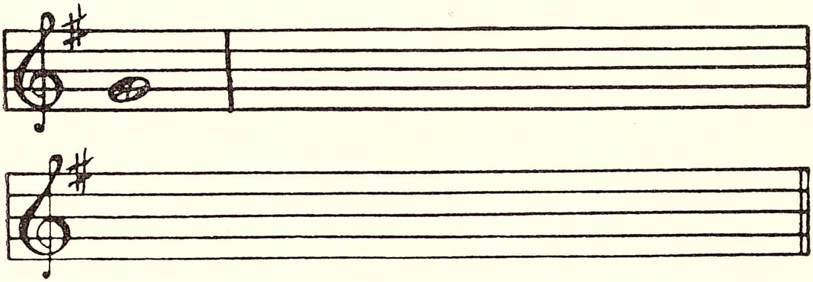
Sol-fa Tunes: Revise sol-fa tunes as directed.

Songs: Revise—

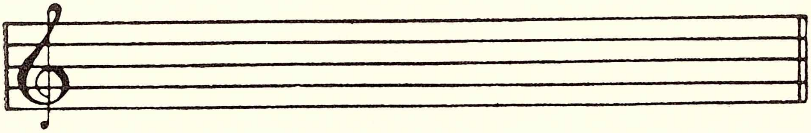
"HASTE THEE, NYMPH"
"DIOSCURI"
"THE PLOUGHBOY"

LESSON 14. October 11—

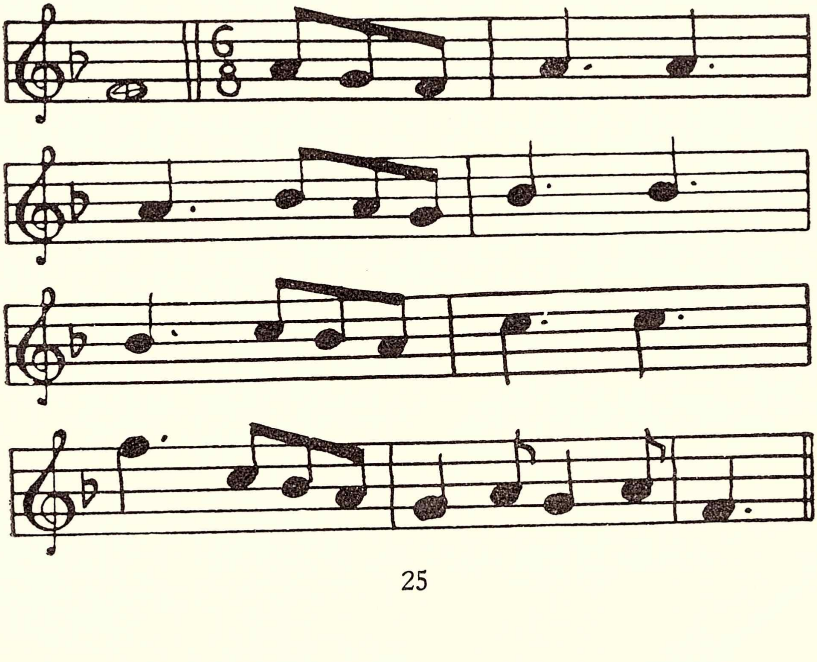
Dictation: You have had dictation of rhythm. The stave below is for dictation of tune.



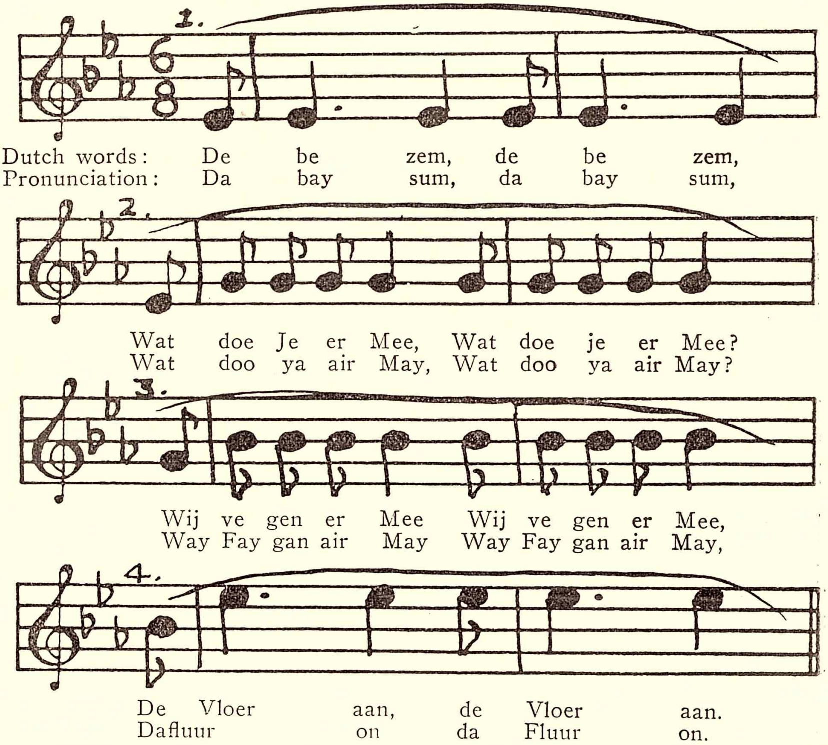
Rhythm: More dictation.



Reading:

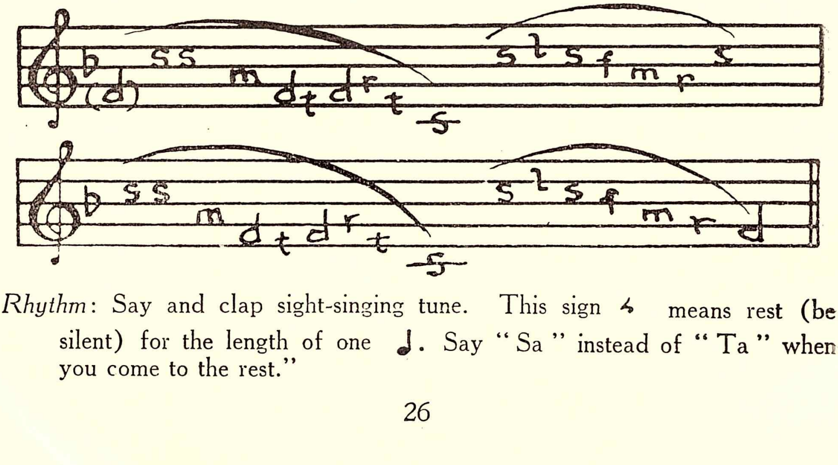


Song: "DE BEZEM." (From the Netherlands. A round).

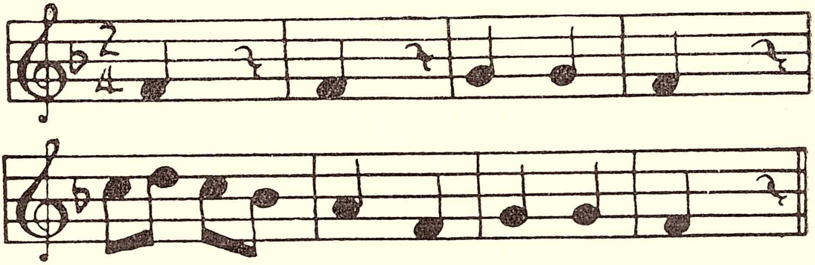

1.
Dutch words: De be zem, de be zem,
Pronunciation: Da bay sum, da bay sum,
2.
Wat doe Je er Mee, Wat doe je er Mee?
Wat doo ya air May, Wat doo ya air May?
3.
Wij ve gen er Mee Wij ve gen er Mee,
Way Fay gan air May Way Fay gan air May,
4.
De Vloer aan, de Vloer aan.
Dafluur on da Fluur on.

LESSON 15. October 18—

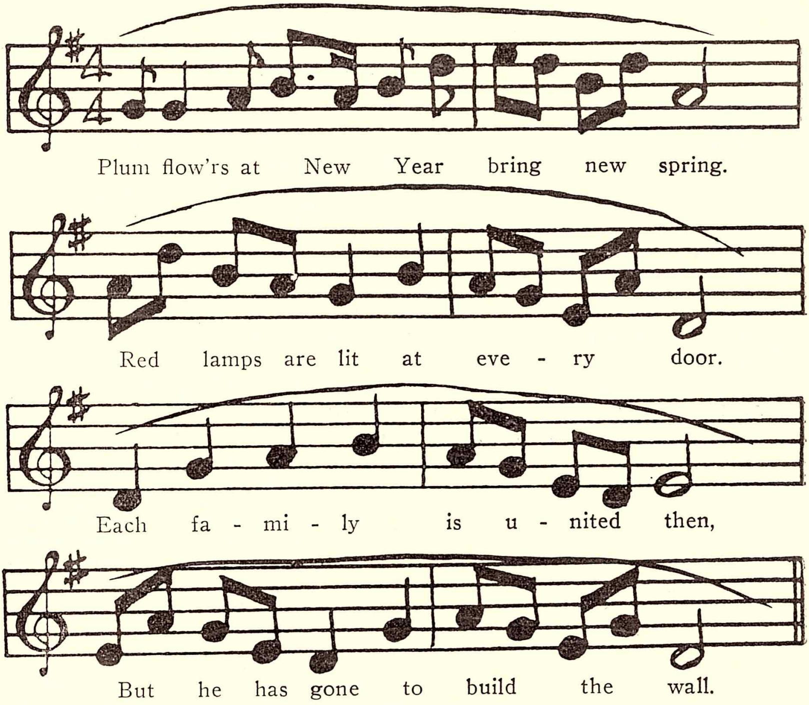
Sol-fa Tune: "OH WHERE, OH WHERE."


(d)
s s m d t d r t s s l s f m r s
s s m d t d r t s s l s f m r d

Rhythm: Say and clap sight-singing tune. This sign 𝄽 means rest (be silent) for the length of one ♩. Say "Sa" instead of "Ta" when you come to the rest."



Song: "MENG CHIANG NYU'S LAMENT." (From "Songs of Cathay," collected by T. Z. Koo).


Plum flow'rs at New Year bring new spring.
Red lamps are lit at eve - ry door.
Each fa - mi - ly is u - nited then,
But he has gone to build the wall.

2. Snowflakes and ice November brings,
I take his clothes a thousand miles,
The ravens lead me step by step,
I weep until I reach the wall.

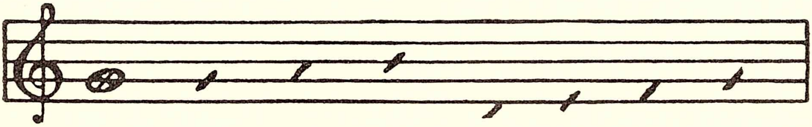
3. Plum flowers to end the busy year.
Each home kills fatted pigs and sheep.
The New Year comes with noisy cheer.
I weep uncomforted alone.

LESSON 16. October 25—

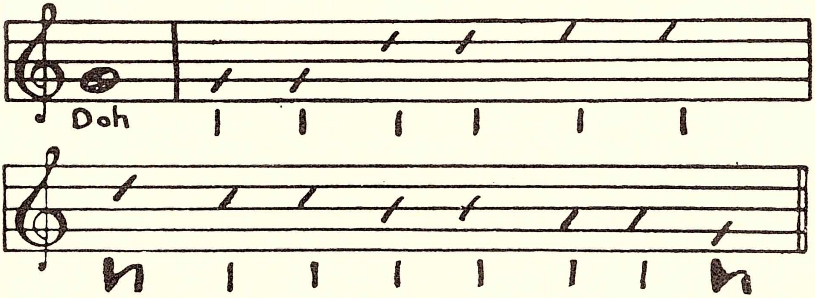
Sol-fa Tune: Revise "OH WHERE, OH WHERE."

Dictation: How to write a tune correctly from dictation.

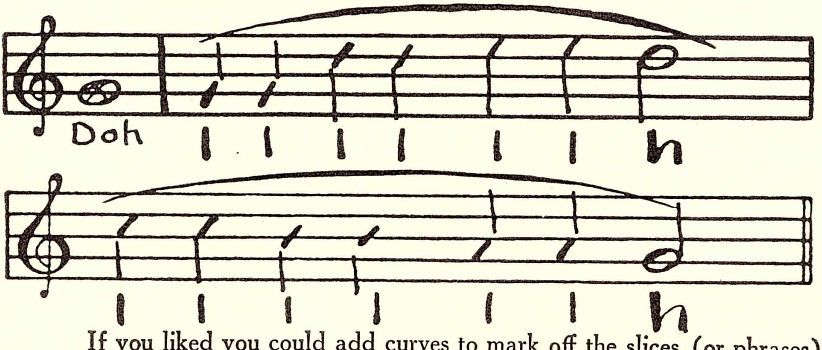
1. I shall dictate the notes slowly and you may write them with strokes like this



2. Then I shall dictate the rhythm of the tune while you take it down in shorthand, writing it underneath the tune. Suppose the tune were "TWINKLE, TWINKLE, LITTLE STAR" it would look like this after we had done the above two things.



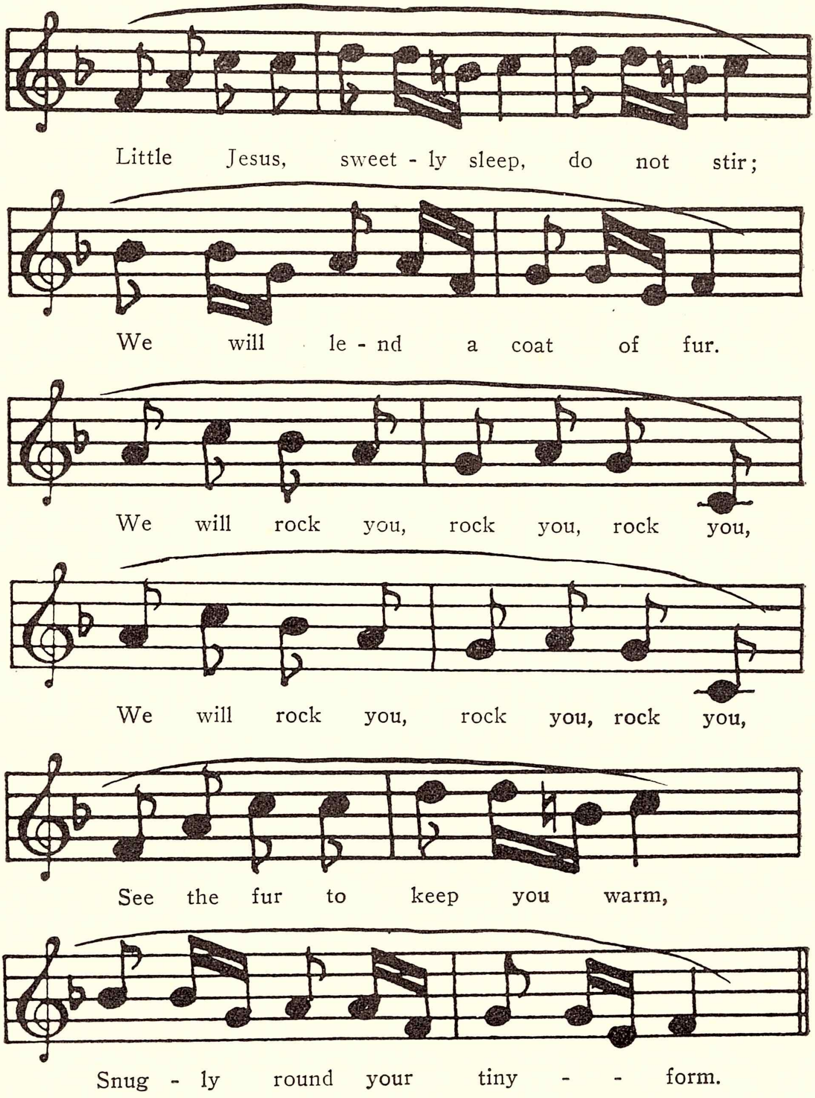
3. Now the only thing to be done is to make the notes agree with the shorthand below. So it would be finished like this:



If you liked you could add curves to mark off the slices (or phrases) that make up the tune.

Note.—Draw the tails or stems of the notes downwards if the music is high, and upwards if the music is low. It looks tidier.

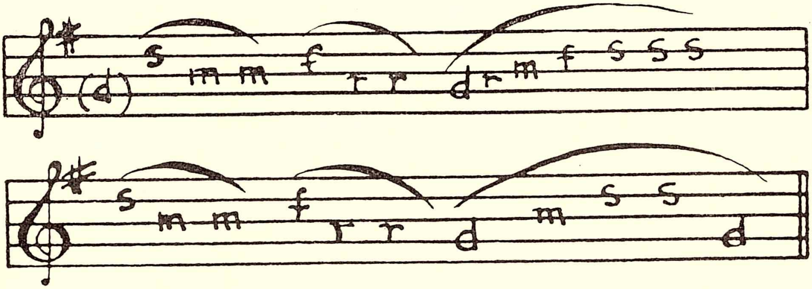
Song: " ROCKING." (Carol. From " The Oxford Book of Carols ").


Little Jesus, sweet - ly sleep, do not stir;
We will le - nd a coat of fur.
We will rock you, rock you, rock you,
We will rock you, rock you, rock you,
See the fur to keep you warm,
Snug - ly round your tiny - - form.

2. Mary's little baby sleep, sweetly sleep,
Sleep in comfort, slumber deep;
We will rock you, rock you, rock you,
We will rock you, rock you, rock you,
We will serve you all we can,
Darling, darling, little man.

LESSON 17. November 1—

Sol-fa Tune: "LIGHTLY ROW."

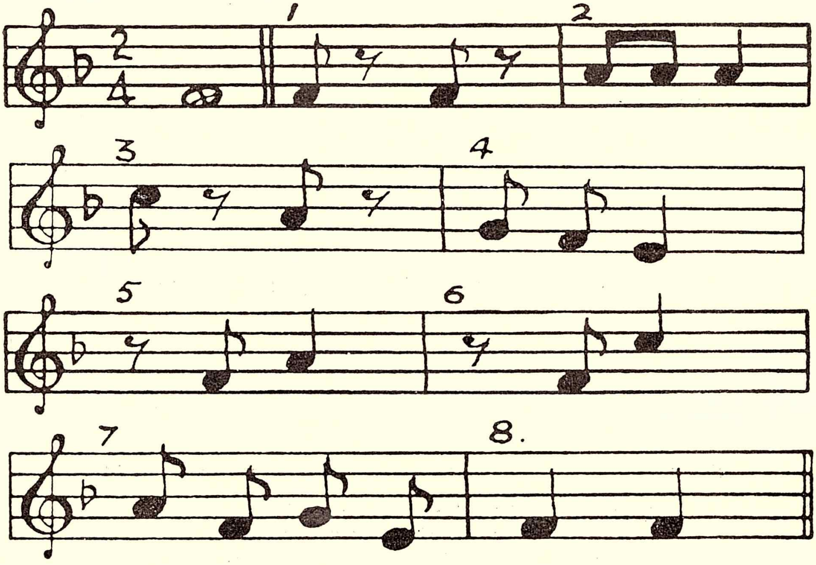


Rhythm: A rest of the same length as ♪ is made like this 𝄾, and is called "sa" or "say"

♪ 𝄾 = ta - say

𝄾 ♪ = sa - tay

Say and clap the rhythm of your reading exercise.



Songs: Revise all this term's songs.

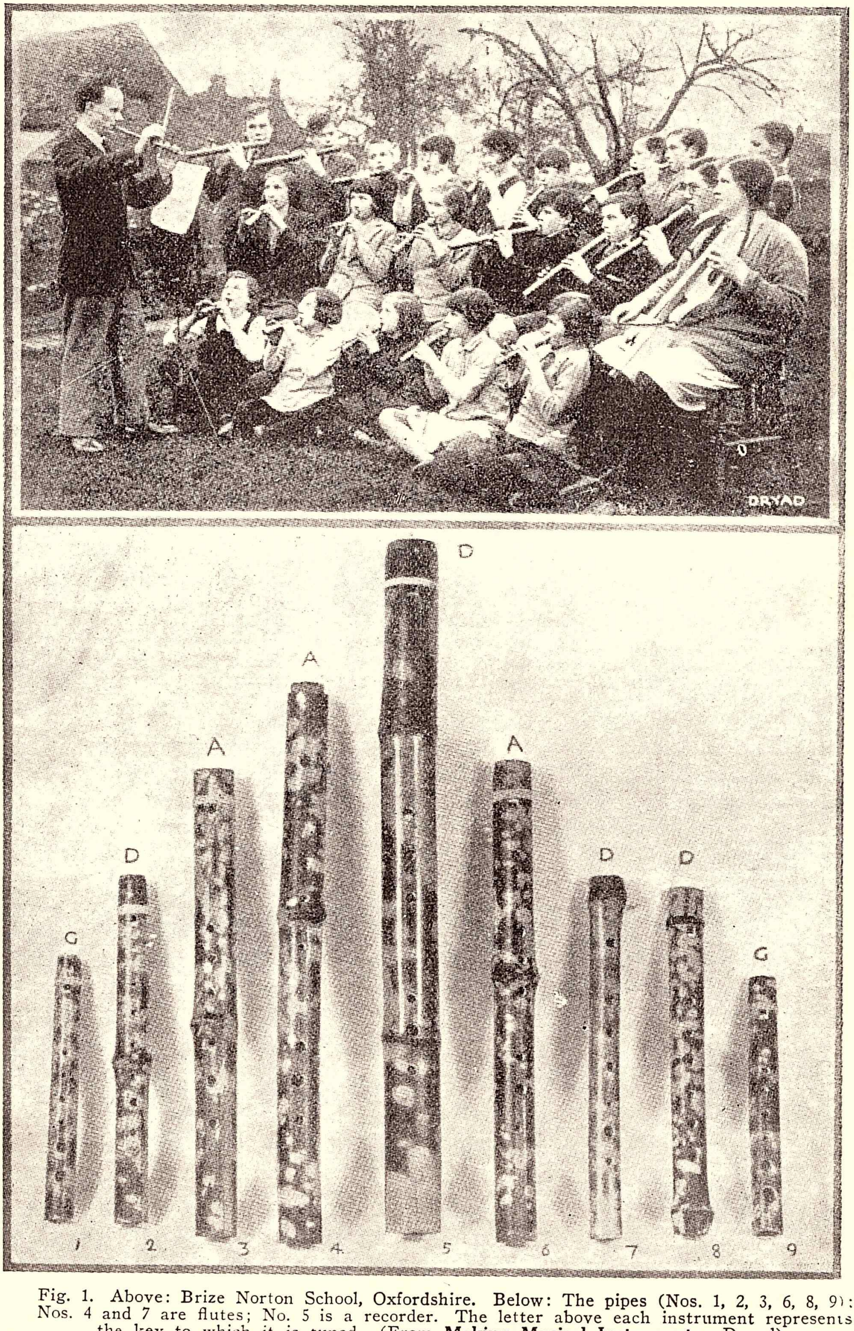


Fig. 1. Above: Brize Norton School, Oxfordshire. Below: The pipes (Nos. 1, 2, 3, 6, 8, 9): Nos. 4 and 7 are flutes; No. 5 is a recorder. The letter above each instrument represents the key to which it is tuned. (From **Making Musical Instruments.** Dryad).

LESSON 18. November 8—

Revision: Sol-fa Tunes—

"OH WHERE, OH WHERE"
"THIRDS," beginning on "Me."
"LIGHTLY ROW"

Songs: Revise songs learnt second term.

LESSON 19. November 15—

This is to introduce you to an instrument that you could make yourselves—the bamboo pipe. In Fig. 1 there are photographs that will interest you. I shall let you hear the instrument and tell you a little about it.

Songs: Bring first term booklet and let us sing those songs again.

LESSON 20. November 22—

How to make a keyboard finder.

Get a piece of brown paper long enough to cover ten or twelve white notes. Hold it on the piano as in Diagram I. (Fig. 2); with a pencil mark where the black notes come, and if you feel with your pencil, you can tell where the cracks between the white notes occur. Mark these too. Then take away the paper and rule it properly like a piano keyboard. Diagram II. shows the brown paper ruled.

The next thing is to mark in the sol-fa on the top edge of the brown paper. Put in Doh about where you see the cross in the diagram. Miss a space and put in Ray, then Me. Watch *Fah*. It comes close to Me; do not miss a space for Fah. Put in the other sounds, but watch that you put top Doh close to Te, just as Fah is close to Me. I have put in marks to show that Me and Fah are close neighbours; also Te and Doh.

Clip your sol-fa strip off the brown paper, and take it to a piano or use your brown paper keyboard. Place it with D in the middle of a white note. Look along your strip, and you may notice that some of the names lie opposite a black note. In Diagram III. Te and Me are both opposite black notes.

LESSON 21. November 29—

Twenty minutes with an orchestra.

Fig. 3 is a plan showing how the members of the orchestra are placed.

Fig. 4 is a short sample of what is called an orchestral score; that is, a piece of music with the part played by each instrument written on a separate line. We shall let you hear each instrument play its part separately, and then you may listen while they all play together.

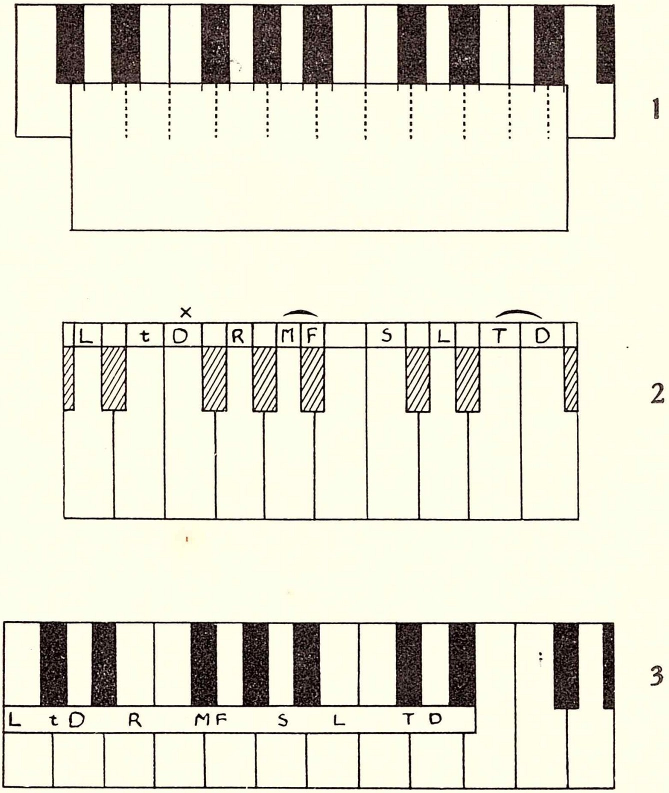


Fig. 2. Keyboard diagrams.

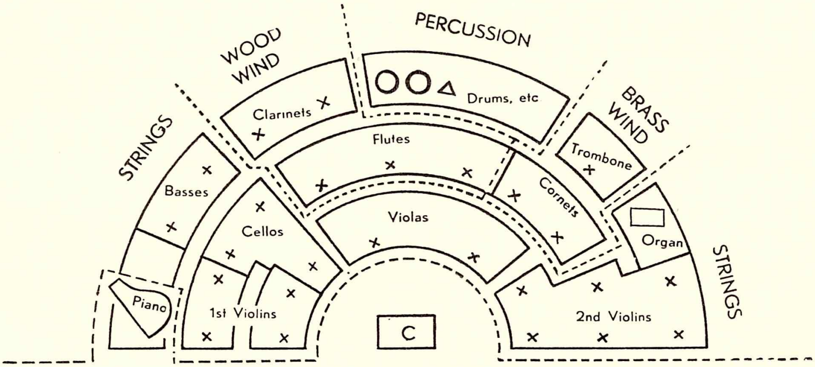


Fig. 3. Position of members of an orchestra.

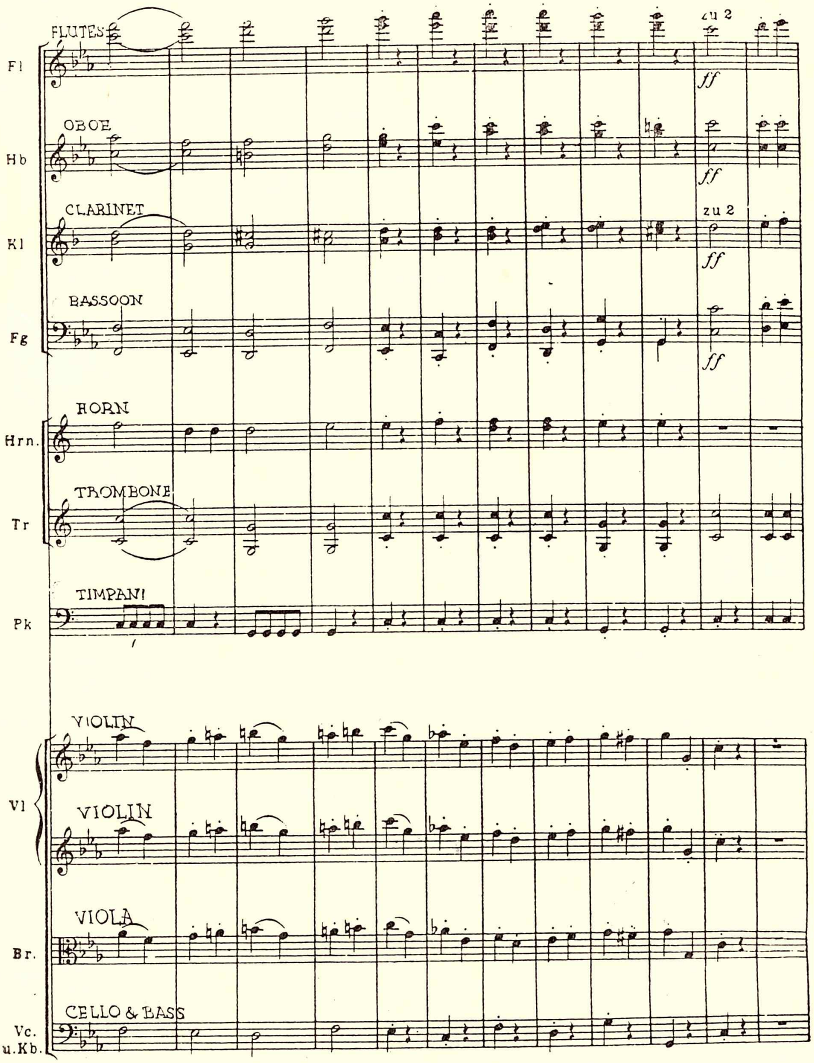


Fig. 4. Sample of orchestral score.

Speaking the King's English

By Mr. Dennis Johns.

Mr. Johns.

Note to the Teacher.—This series of talks, adapted to children of S.3—F.2, is designed to give practice in the basic sounds of English, and to apply the careful speech thus secured to verse-speaking. Teachers can greatly assist the speaker by patterning the mouth positions for the exercises, and by conducting the choral speech. As a rule, each poem will be recited first by the broadcasting group in the Studio, and will then be repeated so that all who wish may join in.

It is suggested that frequent brief "follow-up" practices on the consonant exercises, and individual reading of the little prose extracts given in each lesson, will greatly enhance the effectiveness of the series.

LESSON 1. June 14—

Please have your mirror on your desk.

1. Consonants made with lips. P, B, M.
Plant the purple podded peas in Paddy's plot.
Bring some damp paper to put in the pie-dish.
My mother murmured my name.

2. Mark the P's, B's and M's in the following little piece; and, when you read it, take special care to say these letters clearly:

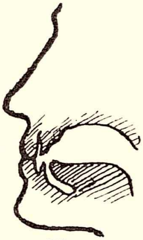


Fig. 5.

Spring has come! From every bend of the garden path the purple pansies peep. Happy birds pipe their pretty melodies from the boughs; and the humming of innumerable bees fills the air.

3. Grouping voices for variety of quality in choral speaking.

CARGOES.

Quinquireme of Nineveh from distant Ophir,
Rowing home to haven in sunny Palestine,
With a cargo of ivory,
And apes, and peacocks,
Sandalwood, cedar-wood, and sweet white wine.

Stately Spanish galleon, coming from the Isthmus,
Dipping through the Tropics by the palm-green shores,
With a cargo of diamonds,
Emeralds, amethysts,
Topazes, and cinnamon, and gold moidores.

Dirty British coaster, with a salt-caked smoke-stack,
Butting through the Channel in the mad March days,
With a cargo of Tyne coal,
Road-rails, pig-lead,
Firewood, ironware, and cheap tin trays.

—*John Masefield.*

LESSON 2. June 21—

1. Consonants with top teeth and bottom lip—F, V.
   Five fat Frenchmen fishing for frogs.
   Seven wives in violet velvet giving heavy loaves.

2. Watch for the special consonants in the following bit of story:
   Five valiant firemen rushed forward to match their strength against their everlasting foe, the Fire. Vainly they strove. The vivid flames flashed ever more fiercely.

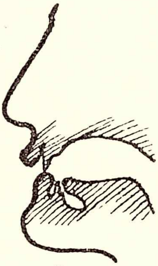


Fig. 6.

3. Grouping of voices to suggest different people.

BUSH BROTHERS.

Said the Tui to the Kiwi,
"O, Brother of the Ground,
Why do you sleep the whole day through,
A sleep so deep and sound?
You never see the rising sun,
The sunset's flaming ray,
The sparkling waves of ocean
That ripple on the Bay.
You never glimpse a butterfly,
Nor hear the Bellbird's call;
Nor bathe in glorious sunshine
That beautifies them all."

Said the Kiwi to the Tui,
"O, Brother of the Air,
Have you ever seen the rising moon
In silver garments fair?
The twinkling stars' reflection
In hidden forest pool?
Or felt the midnight breezes
Blow sweet and wild and cool?
Have you seen the moths a-flutter,
Or heard the Morepork's cry?
If one of us must sleep at night,
Pray, Tane, 'tis not I."

—*E. D. M. Doust.*

LESSON 3. June 28—

1. Consonants with tongue and palate—T, D.
   Don't tie Ted's tie too tightly.
   Ten tame toads, totally tired, tried to trot to Timaru.
2. Watch for the special letters:
   With a resolute tread, David took the track to Tinker's Dell.
   Danger there might be, that he knew well; but he dared not return to town till the day was ended.

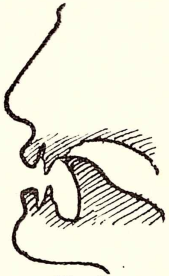


Fig. 7.

3. Grouping the voices more carefully.

THE THROSTLE.

"Summer is coming! Summer is coming!
I know it! I know it! I know it!
Light again, leaf again, life again, love again!"
Yes, my wild little poet.

Sing the new year in under the blue.
Last year you sang it as gladly—
"New, new, new, new!" Is it then so new
That you should carol so madly?

"Love again, song again, nest again, young again!"
Never a prophet so crazy!
And hardly a daisy as yet, little friend;
See, there is hardly a daisy!

"Here again, here, here, here, happy year!"
Oh warble unchidden, unbidden.
Summer is coming, is coming, my dear,
And all the winters are hidden.

—*Lord Tennyson.*

LESSON 4. July 5—

1. More consonants with tongue and palate—L, N, R.
   The lovely lady lit the little lamp.
   Nine nervous noblemen knelt upon their knees.
   Here and there the rushing waters roar.
2. Our story bit:
   The liquid, bell-like notes of the nightingale rang through the little room. Every evening he was there, to carol his lovely melody, as if he knew these men and women needed him.
3. Different qualities of the voice.

OVERHEARD ON A SALT-MARSH.

Nymph, nymph, what are your beads?
Green glass, Goblin. Why do you stare at them?
Give them me.
No.
Give them me, give them me.
No.
Then I will howl all night in the reeds,
Lie in the mud and howl for them.
Goblin, why do you love them so?
They are better than stars or water,
Better than voices of wind that sing,
Better than any man's fair daughter,
Your green glass beads on a silver ring.
Hush, I stole them out of the moon.
Give me your beads. I desire them.
No.
I will howl in a deep lagoon
For your green glass beads; I love them so.
Give them me; give them!
No!

—*Harold Munro.*

LESSON 5. October 18—

1. Still more " tongue and palate " consonants—S, Z, Sh.
   Susie sewed six seams on Saturday.
   Zeta says the boys teased the zebras at the Zoo.
   She sells sea-shells beside the fish-shop.

2. Our story bit:
   " For shame, Master Sheriff!" said Sir Stephen. " Thou shalt not speak thus upon this ship while my sword hangs in its scabbard."

3. Change of voice for change of thought.

WHISTLE, WHISTLE.

Whistle, whistle, old wife, and you'll get a hen.
I wouldn't whistle, said the wife, if you could give me ten.

Whistle, whistle, old wife, and you'll get a cock.
I wouldn't whistle, said the wife, if you gave me a flock.

Whistle, whistle, old wife, and you'll get a coo.
I wouldn't whistle, said the wife, if you could give me two.

Whistle, whistle, old wife, and you'll get a gown.
I wouldn't whistle, said the wife, for the best one in town.

Whistle, whistle, old wife, and you'll get a man!
Wheeple, whauple, said the wife; I'll whistle if I can!

—*Old Ballad.*

LESSON 6. October 25—

1. Consonants with tongue and teeth.—Th.

   Three thirsty thieves thrust themselves through the thicket.

2. Our story bit:

   "I can hardly breathe," said Theo, turning hither and thither in search of a way through the thorny hedge. "I shall be thankful when the thunder is over."

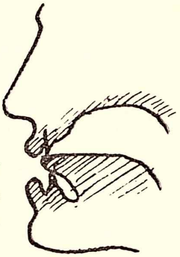


Fig. 8.

3. Solo voices in choral speech.

The Toy Band.

Dreary lay the long road, dreary lay the town;
Lights out, and never a glint of moon.
Weary lay the stragglers, half a thousand down.
Sad sighed the weary, big Dragoon;
"Oh, if I'd a drum here to make them take the road again!
Oh, if I'd a fife to wheedle, 'Come boys, come!
You that mean to fight it out, wake and take the road again.
Fall in! Fall in! Follow the fife and drum!'

Hey, but here's a toy-shop! Here's a drum for me;
Penny whistles, too, to play the tune.
Half a thousand dead men soon shall hear and see.
We're a band!" said the weary big Dragoon.
Rub-a-dub, rub-a-dub! Wake and take the road again!
Wheedle-deedle-deedle-dee! Come, boys, come!
You that mean to fight it out, wake and take your load again!
Fall in! Fall in! Follow the fife and drum!

Cheerly goes the long road, cheerly goes the night.
Cheerly goes the blood to keep the beat.
Half a thousand dead men marching on to fight,
With a little penny drum to lift their feet.
Rub-a-dub, rub-a-dub! etc.

As long as there's an Englishman to ask a tale of me,
As long as I can tell the tale aright,
We'll not forget the penny whistle's "Wheedle-deedle-dee,"
And the big Dragoon a-beating down the night.
Rub-a-dub, rub-a-dub! etc.

LESSON 7. November 1—

1. The throaty consonants—K, G, Ng.
   The big girl in the pink costume climbed the garden gate.
   Ngaire is climbing Ngauruhoe in the spring.
2. Our story bit:
   Clear and cold the golden dawn gleamed upon the summits of the ranges. Aorangi, the Cloud-piercer, flung his long shadow across the glades and gullies.

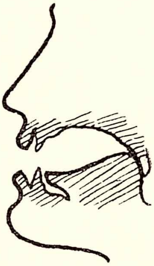


Fig. 9.

3. "Orchestral" effects in choral speech.

THE SONG OF SPEED.

The engine stutters its fiery song
As the things of earth flash by.
The race to the swift and the strong—and the strong;
The turn to the sure of eye.
And death is near; but who would care?
For this is the death to die.

And it's oh, for the rush of the blinding track!
And the whirl of the leaping wheel;
The slither of foam bright overside,
The cry of the hounds at heel.

The call of the road is a call of old
When the song of the wind is still,
And the sunset reddens to gold—to gold,
When the poplar halts on the hill;
But hill and road, we hold them best
As a test of the driver's skill.

And it's oh, for the gleam of the metal ways!
And the thunder of glowing train;
The quiver of deck to the racing screw,
The roar of the reeling plane.

The ring of hoofs on the morning air,
The frost-hard crunch to the ride,
Are good to hear when the distance fades,
Eaten up by the big roan's stride;
But the ways are best when the ways are fair,
And the throttle's open wide.

And it's oh, for the thresh of the leeward race,
The stretch of the bulging sail;
The curtain of dust on the level road,
The whine of the speed-made gale.

—*C. Quentin Pope.*

LESSON 8. November 8—

1. The mouth consonants—H, Y, W, Wh.

He hit his head hard with a heavy hammer.
Yesterday you yawned, didn't you?
We must weather the weather,
 Whatever the weather,
  Whether we like it or not.

2. Our story bit:

We waited while the weary workmen turned again to their heavy task. Hardly had they wheeled the yellow waggon into the yielding mire when the hurricane hurled itself upon us.

3. Refrain in choral speech.

BOOT AND SADDLE.

Boot! Saddle! To horse, and away!
Rescue my castle, before the hot day
Brightens to blue from its silvery grey.
 Boot! Saddle! To horse, and away!

Ride past the suburbs—asleep, as you'd say.
Many's the friend there will listen, and pray
"God's luck to the gallants that strike up the lay,
 Boot! Saddle! To horse, and away!"

Forty miles off, like a roebuck at bay,
Flouts Castle Brancepath the Roundheads' array.
Who laughs, "Good fellows, ere this, by my fay,
 Boot! Saddle! To horse, and away?"

Who? My wife, Gertrude, that, honest and gay,
Laughs when you talk of surrendering—"Nay,
I've better counsellors. What counsel they?—
 Boot! Saddle! To horse, and away!"

LESSON 9. November 22—

1. Some "tongue-twisters."

Shift these three thick thistle sticks quickly.

Peter Piper picked a peck of pickled pepper-corns.

A copper coffee cup, or a copper cotton cutter?

2. Some humorous verse for choral speaking.

THE LITTLE PEACH.

A little peach in the orchard grew,
A little peach of emerald hue.
Warmed by the sun, and wet by the dew,
It grew.

One day, passing that orchard through,
That little peach dawned on the view
Of Johnny Jones and his sister Sue—
Them two.

Up at the peach a club they threw.
Down from the stem on which it grew
Fell that peach of emerald hue.
Mon dieu!

John took a bite, and Sue a chew,
And then the trouble began to brew—
Trouble the doctor couldn't subdue.
Too true!

Under the turf where the daisies grew
They planted John and his Sister Sue.
And their little souls to the angels flew.
Boo-hoo!

What of that peach of the emerald hue?
Warmed by the sun, and wet by the dew?
Ah, well, its mission on earth is through.
Adieu!

—*Eugene Field.*

TWO SNAILS.

She was a plump little English snail,
He was of French extraction;
The Channel rolled between them,
Yet he loved her to distraction.
He asked her, through the telephone,
In tones of deep emotion,
If she would cross the sea for him,
And cross the stormy ocean.
" No, thank you, Sir," she coyly said;
" I love you, but no matter—
I could not feel at home in France
Where snails are fried in batter!"

—*J. F. Bridge.*

LESSON 10. November 29—

1. Looking backward.
2. The magic of many voices.

THE SONG OF THE SEA-WIND.

How it sings, sings, sings,
    Blowing sharply from the sea-line
With an edge of salt that stings;
    How it laughs aloud, and passes
As it cuts the close cliff-grasses;
    How it sings again, and whistles
As it shakes the stout sea-thistles—
        How it sings!

How it shrieks, shrieks, shrieks,
    In the crannies of the headland,
In the gashes of the creeks!
    How it shrieks once more, and catches
Up the yellow foam in patches;
    How it whirls it out and over
To the cornfield and the clover—
        How it shrieks!

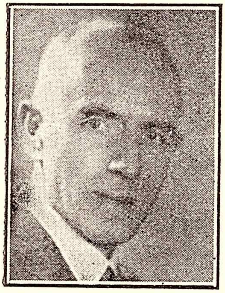
How it roars, roars, roars,
    In the iron under-caverns,
In the hollows of the shores.
    How it roars anew, and thunders
As the strong hull splits and sunders;
    And the spent ship, tempest-driven,
On the reef lies rent and riven—
        How it roars!

How it wails, wails, wails,
    In the tangle of the wreckage,
In the flapping of the sails!
    How it sobs away, subsiding
Like a tired child after chiding;
    And across the ground-swell rolling
You can hear the bell-buoy tolling—
        How it wails!

—*Austin Dobson.*

To-morrow's History

By Mr. B. M. Kibblewhite.


Mr. Kibblewhite.

[We continue the series of talks on important current events. For convenience the talks do not run in unbroken succession, but are set down at intervals of several weeks.—C.R.L.]

The aim of the talks will be two-fold:—

1. To show that the Book of History is not closed and sealed, but is daily being added to; that news and events of to-day will in future be history—" To-morrow's History."
2. To show the bearing of the past on the present, and how the doings and events of the present can be better understood and illustrated by a knowledge of the past.

Thus the children will be encouraged to study the events of the day. Obviously the subject matter of the talks cannot be prepared beforehand, and we shall be dependent largely on the news as presented to us in the newspapers from day to day. The time given to any topic will be regulated by the number of topics to be considered. To assist in the lesson the children should have their atlases ready for use.

Any suggestions for topics, requests for fuller information and comments will be welcomed. If in any way the study of history can be made of more interest to the children, these talks will be worthwhile.

TALK 1. June 7.

TALK 2. July 12.

TALK 3. August 2.

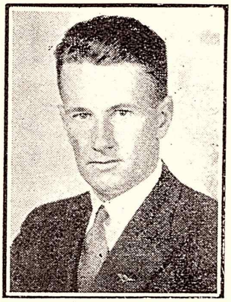
TALK 4. September 13.

TALK 5. October 11.

TALK 6. November 15.

Radio in Aircraft

By Mr. John S. W. Stannage.



Mr. Stannage.

All boys and girls have heard of Mr. Stannage, whose name is familiar to us mainly on account of his association with Sir Charles Kingsford Smith on many of his great flights. Mr. Stannage was for ten years a seafaring radio operator, and he has made a special study of aircraft radio. He was a member of the crew of the aeroplane "Canberra," which rescued Kingsford Smith and crew of the "Southern Cross" when lost in the desert of North-west Australia in 1928. In 1930 he accompanied Kingsford Smith in the "Southern Cross" on the first east-west crossing of the Atlantic Ocean by aeroplane. He has made four successful crossings of the Tasman Sea as radio operator in the "Southern Cross," and you will remember that Mr. Stannage was in the machine when it had to turn back 600 miles from land because of a broken propellor. Also, you will recall, he was on the "Manuka" when it was wrecked near Dunedin in 1929. Mr. Stannage has had many thrilling experiences.—C.R.L.

TALK 1. July 19—

First mobile radio sets.
First time radio used in the air.
Wartime radio.
Air radio in war.
Comparison with to-day.

1. When was wireless first used to save life at sea?
2. When was wireless telephone first used?
3. What is the difference between wireless and radio?
4. Do you know the speed of a wireless wave?
5. Who first discovered the principles of wireless?

TALK 2. July 26—

General development of the whole radio field.
Special development of aircraft radio.
The two systems of air radio navigation in England and the United States of America.
Radio aids at Croyden, England.
Radio aids at Los Angeles, U.S.A.

1. Is the navigation of an aircraft over sea similar to the navigation of a ship?
2. What is the longest ocean airway in the world at present operating?
3. Do New Zealand aeroplanes fly across water?
4. Do New Zealand air services use radio systems?
5. How is radio most able to assist airline pilots in N.Z.?

TALK 3. August 2—

Modern direction finding radio equipment.
Its use by airways.
Description of Pan American trans-Pacific radio services.
Description of N.Z. radio services.
Trend of future development.
A prediction of aerial navigation facilities in twenty years' time.

1. Does N.Z. communicate direct with England by radio?
2. How can radio assist fighting aircraft in modern times?
3. Do short waves travel greater distances than long waves?
4. Will television ever be used for assisting air-transport?
5. How does the noise of an aeroplane engine affect aircraft radio equipment?

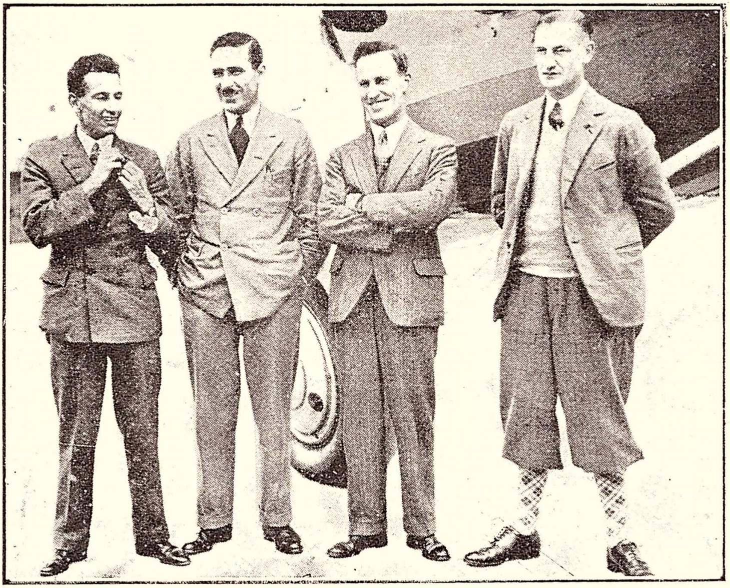


Fig. 10. Crew of "Southern Cross" on Atlantic flight.
Left to right: Messrs. Stannage, Saul, Sir Charles Kingsford Smith, Mr. Van Dijk.

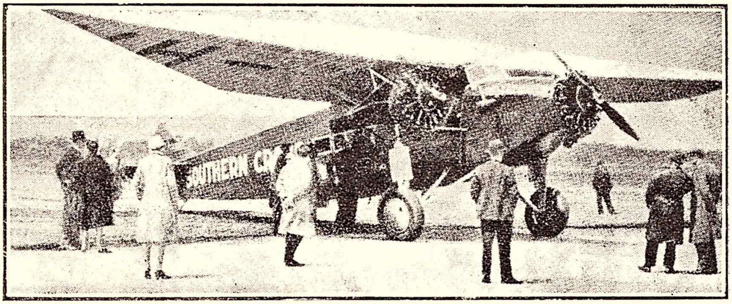


Fig. 11. The "Southern Cross" at Croydon, England.

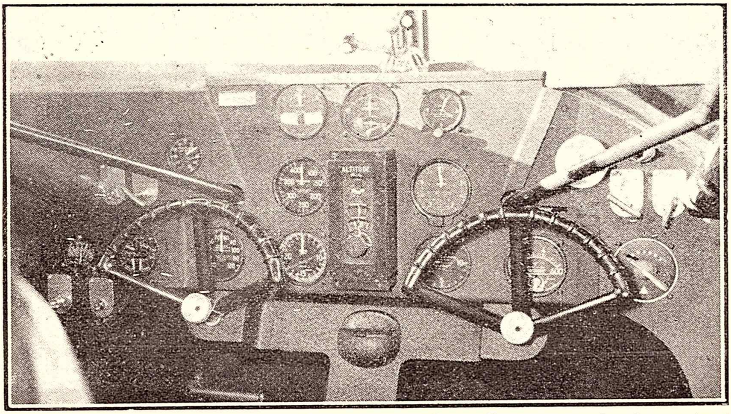


Fig. 12. Instrument panel of a modern plane. The radio compass is the centre-top instrument.

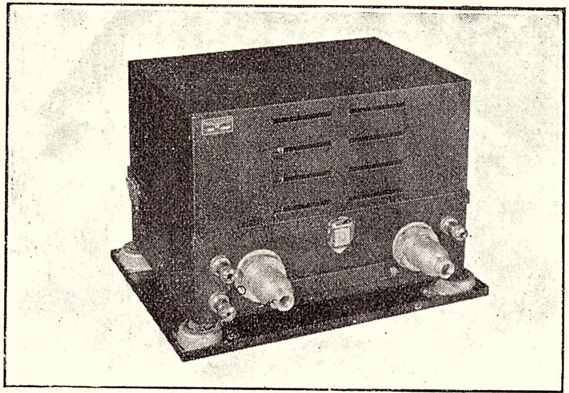


Fig. 13. Aircraft receiver.

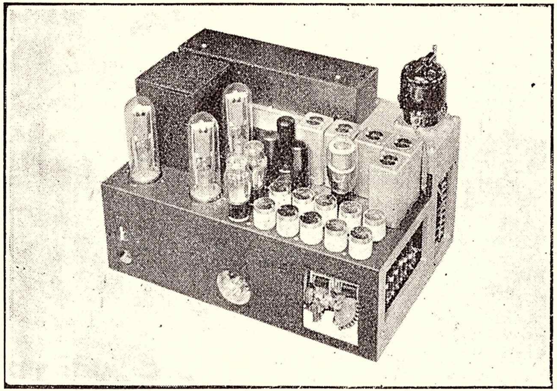


Fig. 14. This shows the compactness of the modern aircraft transmitter.

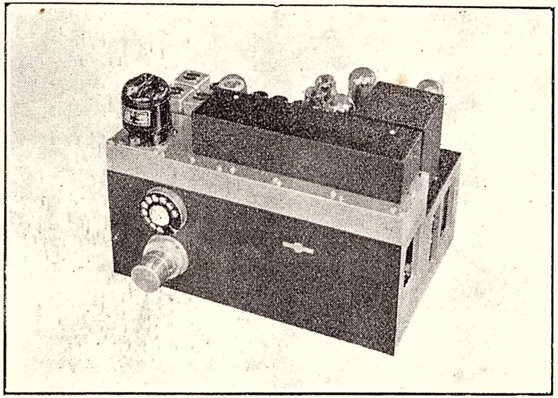


Fig. 15. The very latest in aircraft transmitter design. The pilot uses the telephone dial to switch to different stations and frequencies just as we use the ordinary telephone.

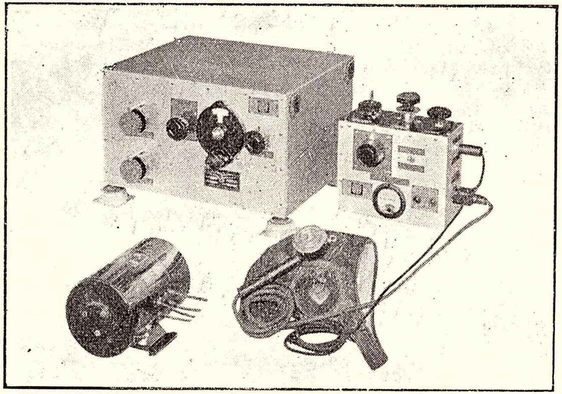


Fig. 16. Phone, transmitter and receiver and all components for the modern battle plane.

Commercial Aviation

By DR. W. S. DALE.

Dr. Dale.

The conquest of the air is a tale of courageous pioneering and planning down the centuries. The Greeks tell the story of Dædalus, a mythical sculptor, who fled from Crete by means of wings. His son, Icarus, you may remember, soared too close to the sun; the heat melted his wings and he fell to earth. Later still in Britain there is the legend of a flight by Bladud, the mythological tenth king, who is reputed to have died in 852 B.C. He is supposed to have made for himself a pair of feather wings with which he attempted to glide, but losing control came to earth on the Temple of Apollyon in the city of Trinovantum (London). About 1020 A.D. Oliver of Malmesbury fitted wings to his hands and feet, and, launching himself from a tower, managed to glide for about a furlong before falling to earth. John Damain, a favourite of James IV. of Scotland, attempted a similar feat. From the top of Stirling Castle he jumped off, only to come hurtling to the ground. His excuse for failure was that he used hens' feathers in place of those of the eagle. And so on, down the centuries, runs the tale of attempts to fly. Heavier than air machines (aeroplanes), lighter than air machines (airships and balloons), each has strong support in different countries. How man has managed to overcome difficulties is a fascinating story, but none is quite so thrilling as the way in which man has managed to adapt flying for commercial uses. Pioneers of this branch of flying are men and women whom boys and girls know well by name, for it is only within the last few years that commercial aviation has been established.

TALK 1. September 20—

THE ORIGIN AND GROWTH OF COMMERCIAL AVIATION.

Points of the Talk:

(a) The first English regular service was commenced on August 25, 1919, between London and Paris.

(b) London-Amsterdam route opened in the spring of 1920.

(c) October, 1922. London was connected with Berlin through the Amsterdam branch.

(d) 1923 was the year Switzerland was included in the network of routes.

(e) The use of long-distance flights.

(f) The three main requirements in air transportation.

(A pencil and pad, as well as an atlas, will be most useful for this lesson).

TALK 2. September 27—

A COMMERCIAL AIR-PORT AND THE MAKING OF COMMERCIAL AIRWAYS.

Why is it that so much care is needed before an air-port can be established?

The advantages and disadvantages of a site.

What is required at such a port?

The measures taken to ensure safety and efficiency.

The making of a highway for aviation.

TALK 3. October 4—

SOME AIR-ROUTES OF TO-DAY.

(A map and a sharp-pointed pencil, please).

What governs the decision as to the direction of an air-route?

Some air-routes of the world.

The utility of aerial transport.

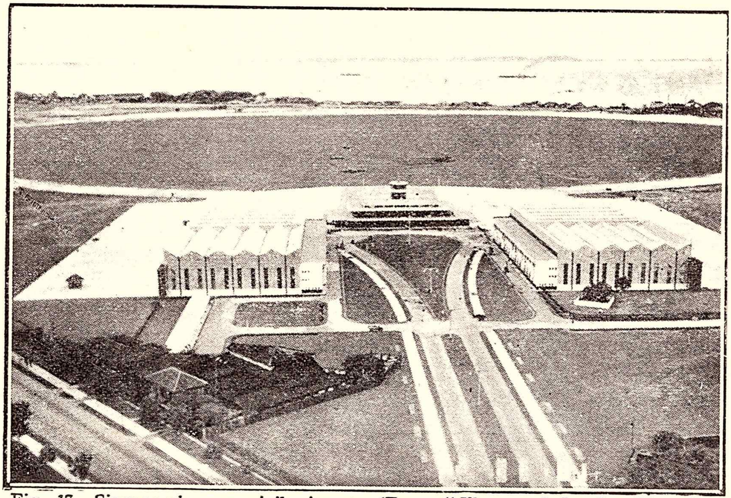


Fig. 17. Singapore's new civil airport. (From "**Illustrated London News**").

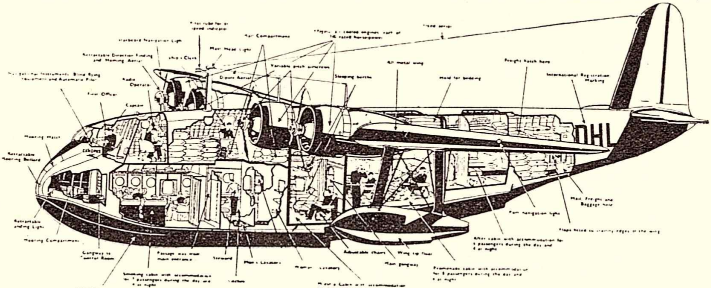


Fig. 18. Empire flying-boat. (From "**Journal of Royal Empire Society**").

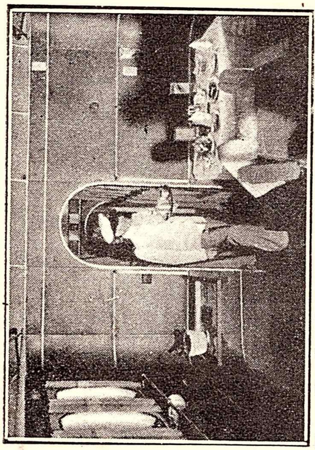


Fig. 19. Spacious passenger accommodation in one of Imperial Airways Empire flying-boats. (From "**Illustrated London News**").

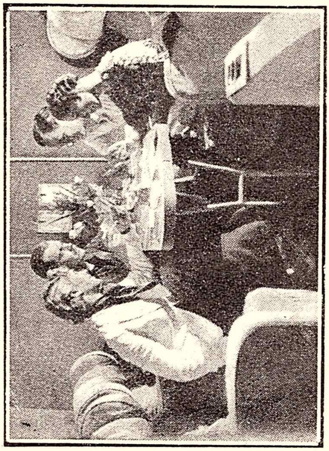


Fig. 20. Smoking room of an Empire flying-boat. (From "**Illustrated London News**").

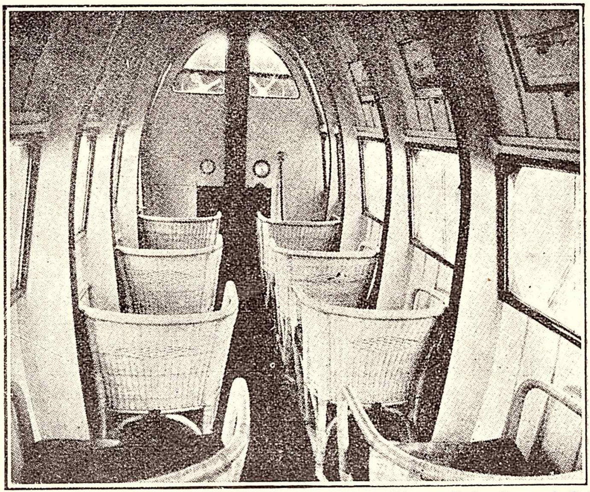


Fig. 21. Interior of a modern passenger plane. (From **"Outline of Science"** by J. A. Thomson).

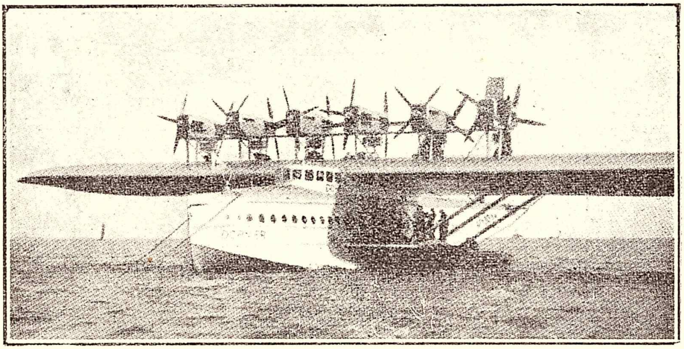


Fig. 22. The famous "Do X" is as graceful as it is powerful. (From **"The Wonder World of Modern Marvels"**).

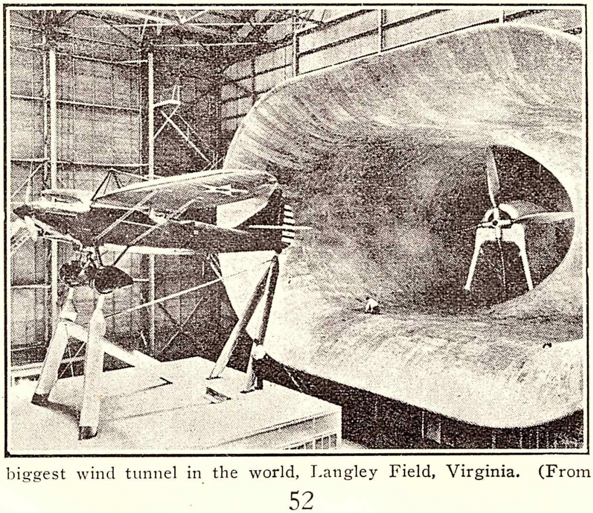


Fig. 23. The biggest wind tunnel in the world, Langley Field, Virginia. (From **"Fortune"**).

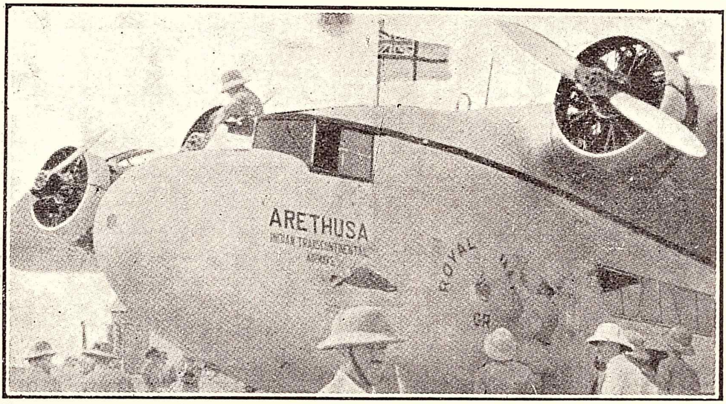


Fig. 24. "Arethusa' being loaded with mails for England and Calcutta. (From **British Airways,"** Nelson).

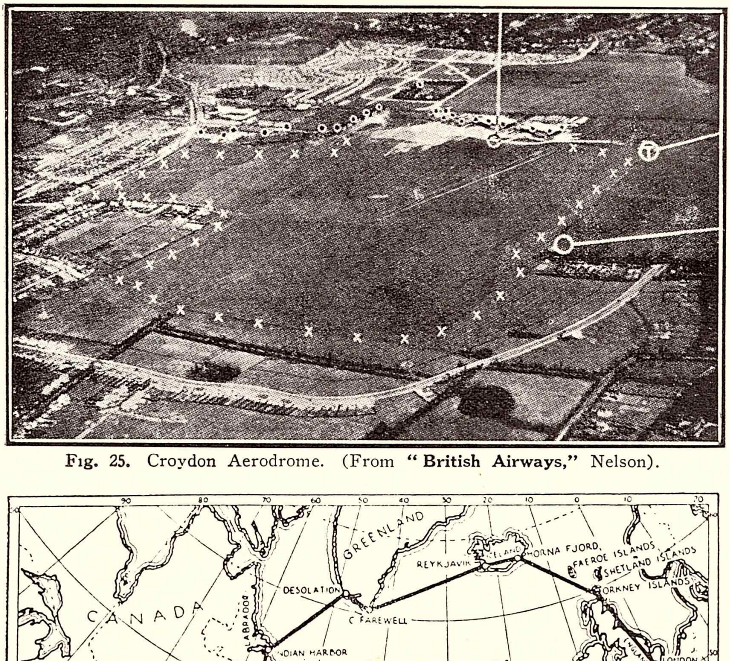


Fig. 25. Croydon Aerodrome. (From "**British Airways,"** Nelson).

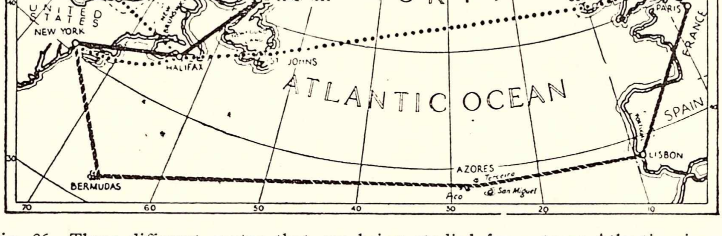


Fig. 26. Three different routes that are being studied for a trans-Atlantic airway. (From "**British Airways,"** Nelson).

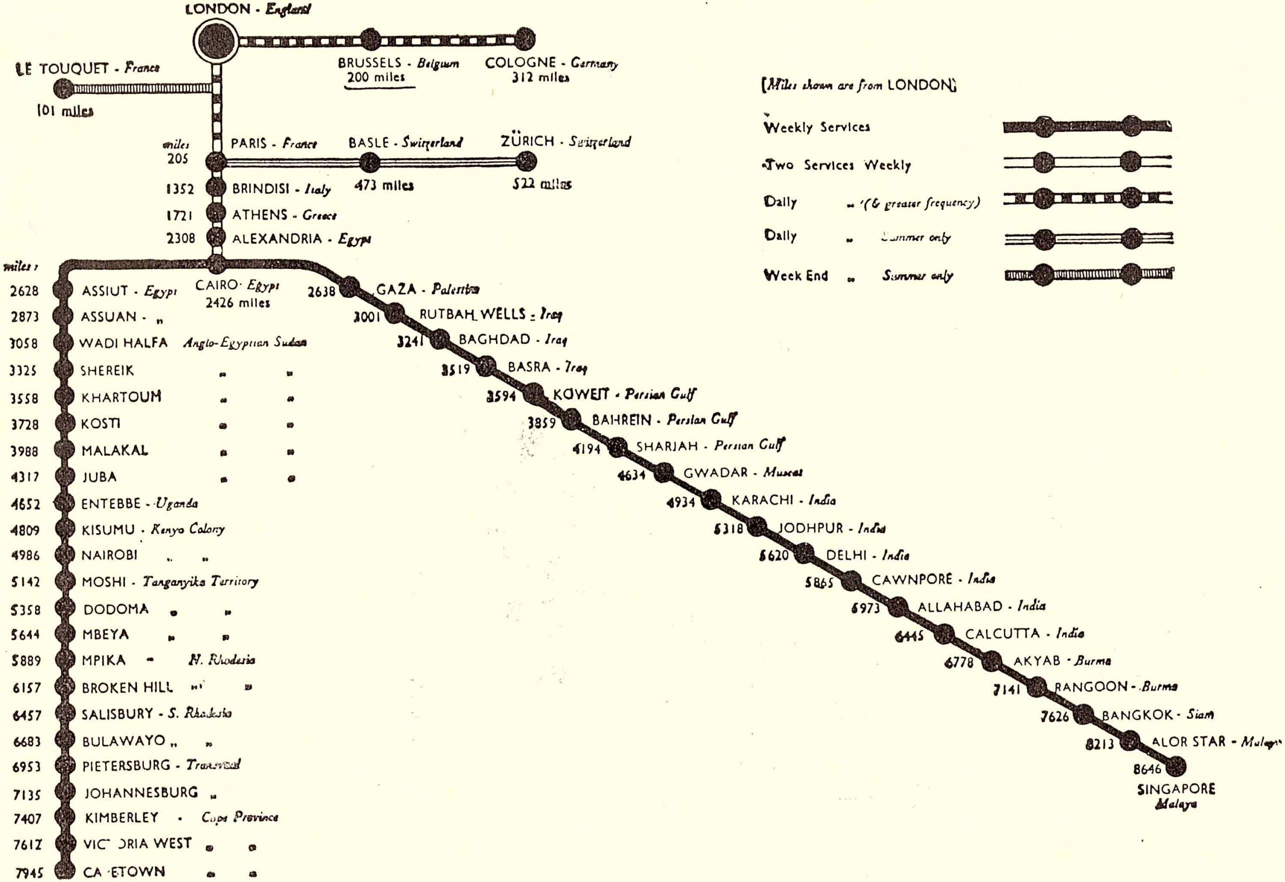


Fig. 27. Diagram to show British air routes. (From "**British Airways,**" Nelson).

GEOGRAPHY

The most primitive types of men get all they need, and their wants are usually very easily satisfied, by simply hunting for or collecting materials for food, clothing and shelter. Elsewhere we find people whose occupations rise a little above the primitive hunting stage—people who have learned to keep flocks and herds, and who therefore are more constantly occupied tending their animals and providing for their welfare. Then others have learned to till the soil, a further advance, for this occupation calls for more constant and skilful labour than that of herding animals, and men have to exercise more forethought to be successful cultivators than to be successful herders. Finally, we come to people engaged in the highest and most involved occupations of all– those connected with manufacturing and trading.

But even in the most civilised communities there are men that follow collecting or hunting occupations (miners, fishermen, trappers), and others that are herders, their methods, however, more scientific and successful than those of primitive nomadic herding peoples. Thus, in more advanced communities of people we find "division of labour," not usually found amongst those that are backward. Find out what is meant by the expression "division of labour."

We have already studied various types of men whose occupations are mainly at the collecting or hunting level, and we have also learned something about certain peoples who practise herding occupations. We now come to consider the activities of peoples engaged in tilling the soil. Finally, in the third term we will complete our survey of human occupations by considering some of the world's important manufacturing industries.

—C.R.L.

Grow More Trees

By MR. C. L. GILLIES.

Mr. Gillies.

We shall deal briefly with the use man has made of forests. Timber and forest products have been, and still are, of the greatest value to man in many of his activities—for shelter, for furniture, for transport, for newspapers, to quote a few.

Man's mis-use of forests and the consequent problem of soil erosion by water and wind will prepare us for an account of some of our native plants useful for tree growing, and should give an impetus to our efforts to raise as many trees as possible to commemorate the Centenary of the Dominion in 1940.

TALK 1. November 8.

TALK 2. November 15.

TALK 3. November 22.

TALK 4. November 29.

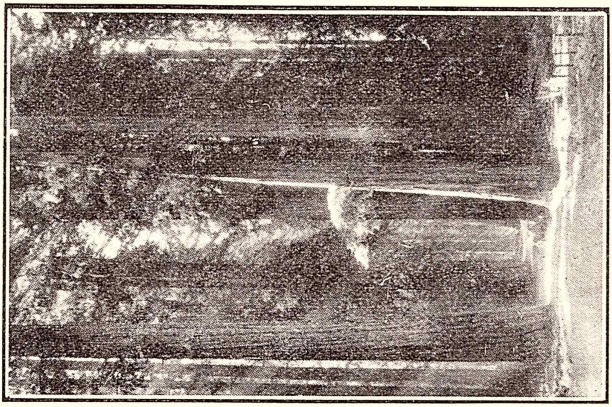


Fig. 28. Giant redwoods.

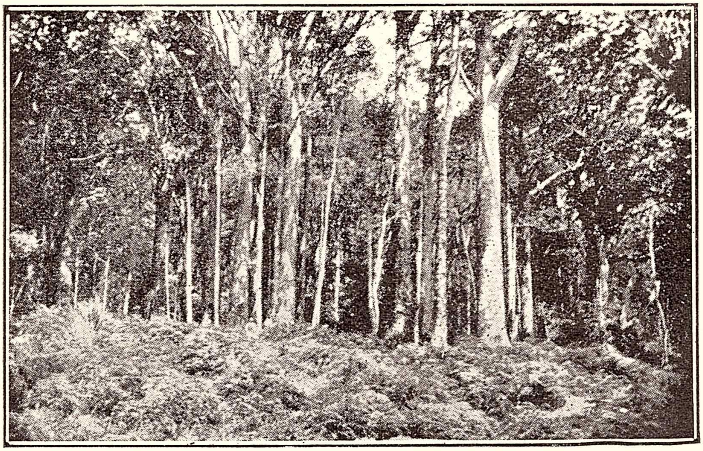


Fig. 29. Where ancient forest meets the new-born heath. (From "**Wanderlust Magazine.**")

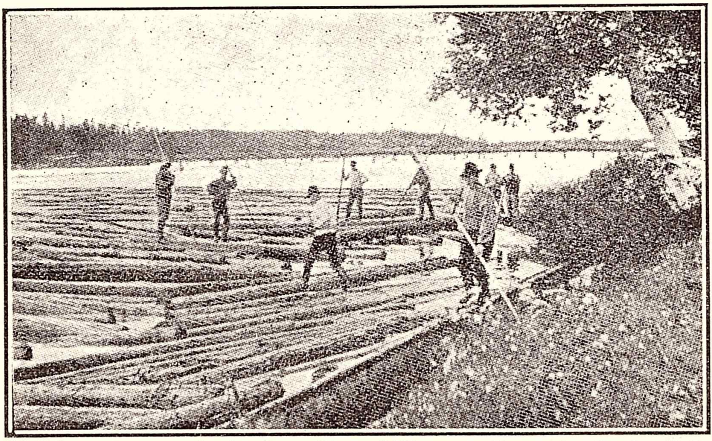


Fig. 30. River-men at work, Sweden. (From "**Kingsway Geography Readers.**" Evans).

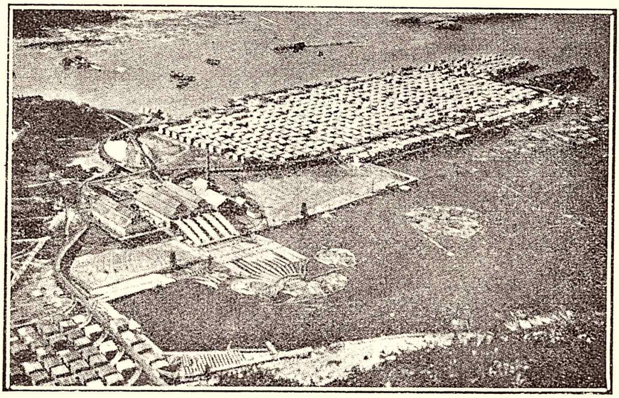


Fig. 31. Swedish saw-mill from the air. (From "**Kingsway Geography Readers.**" Evans).

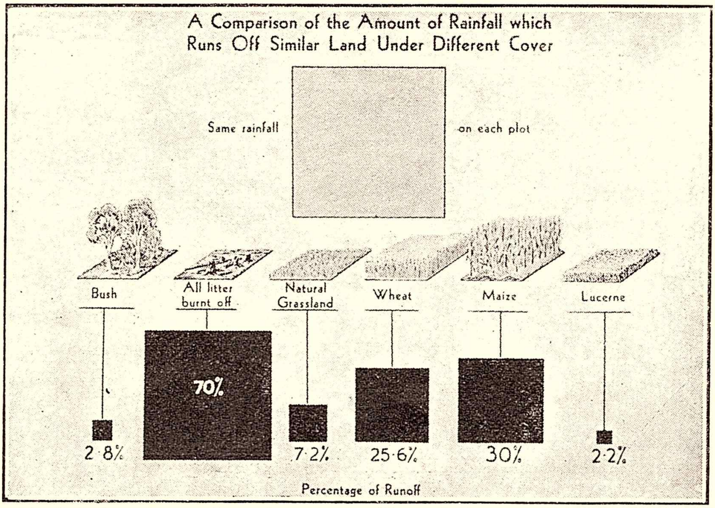


Fig. 32. Relation of run-off to plant-cover. (From "**Conserve Your Soil.**" Issued by Bank of New South Wales).

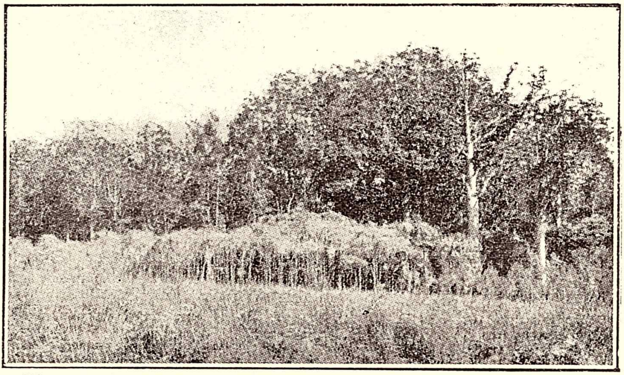


Fig. 33. Forest regeneration. (From "**Wanderlust Magazine.**")

The World's First Crops.

MR. C. L. GILLIES.

TALK. June 7—

The beginnings of crop-growing marked a most important phase in the civilization of mankind. While man was a hunter and herdman he had little leisure time and no fixed place of abode. Crop-growing anchored him in one spot at least for one season. He now had time to devote to arts and crafts and to reflection. His cultural progress thereafter was rapid. In this talk we will discover how and where the first crops were grown.

Growing Grain in Irrigated Lands.

MR. C. L. GILLIES.

TALK. June 14—

The World's Wheat Crops.

MR. C. L. GILLIES.

TALK. June 21—

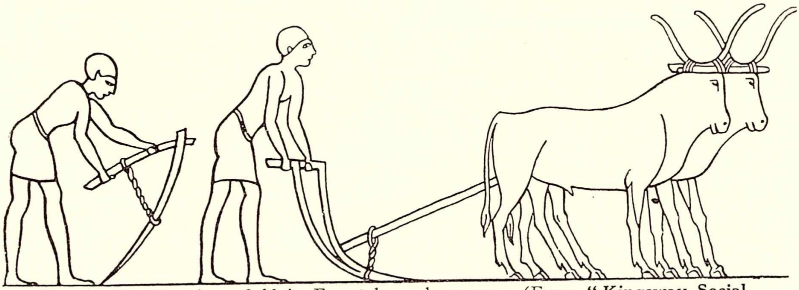


Fig. 34. Working in a field in Egypt long, long ago. (From **"Kingsway Social Geographies,"** Evans).

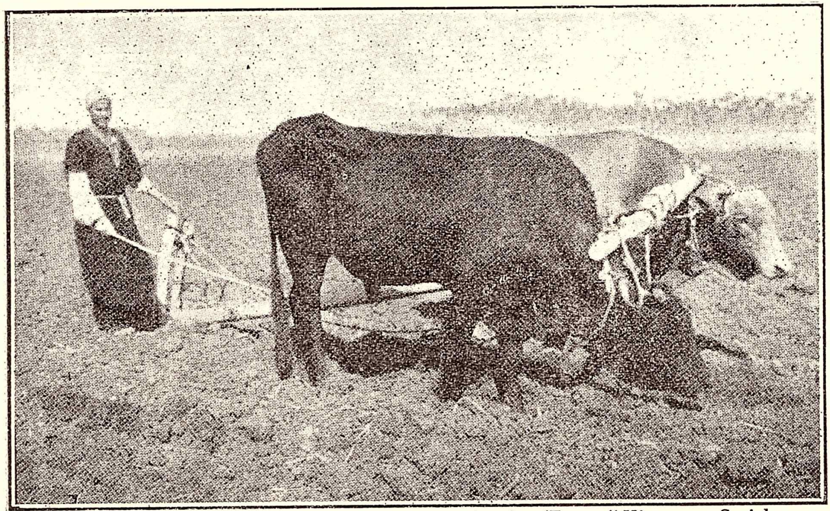


Fig. 35. Egyptian farmer with ox-drawn plough. (From **"Kingsway Social Geographies,"** Evans).

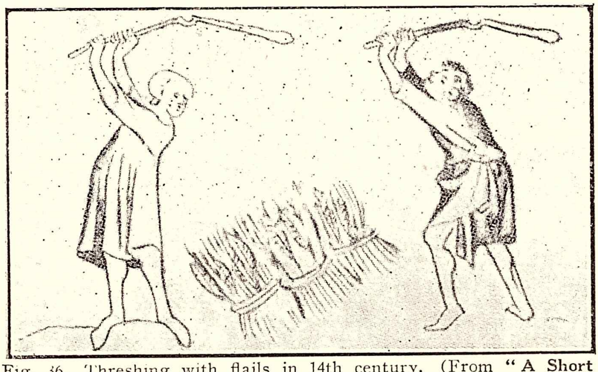


Fig. 36. Threshing with flails in 14th century. (From **"A Short History of British Agriculture,"** O.U.P.).

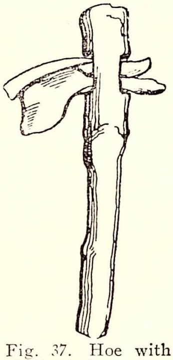


Fig. 37. Hoe with shell blade.

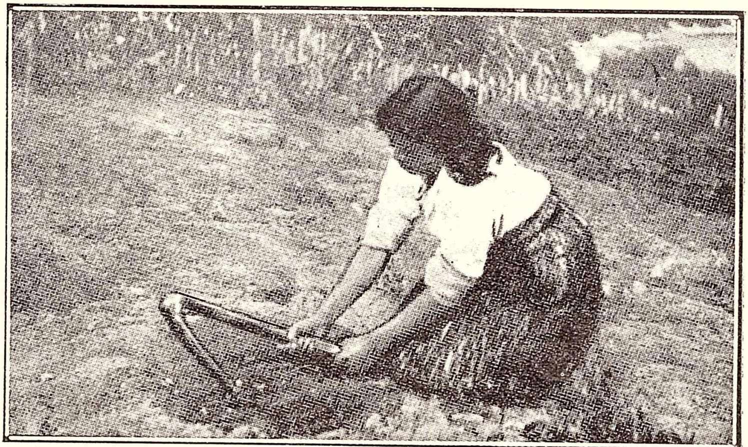


Fig. 38. Maori woman using a grubber (timo). (From **"Maori Agriculture,"** by Edsdon Best).

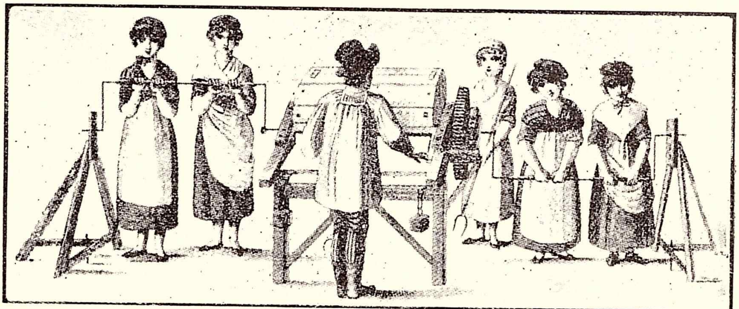


Fig. 39. Hand threshing mill. (From **"A Short History of British Agriculture,"** O.U.P.)

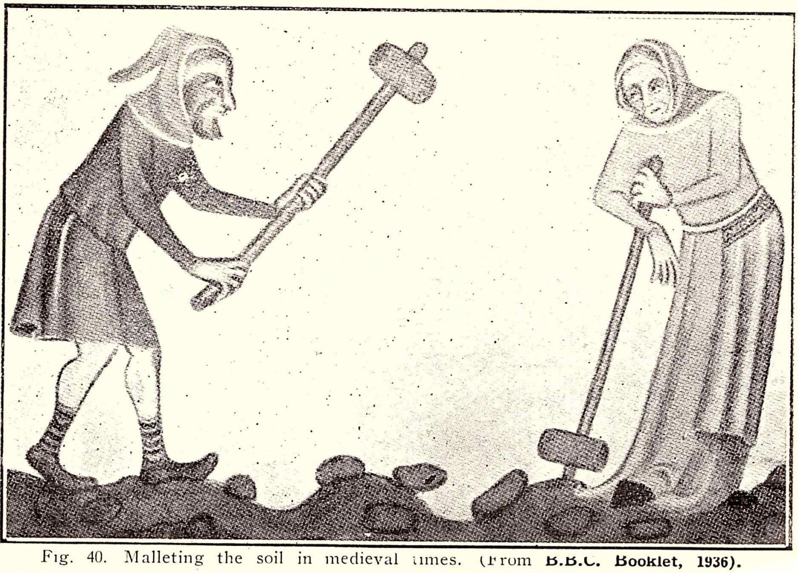


Fig. 40. Malleting the soil in medieval times. (From **B.B.C. Booklet, 1936).**

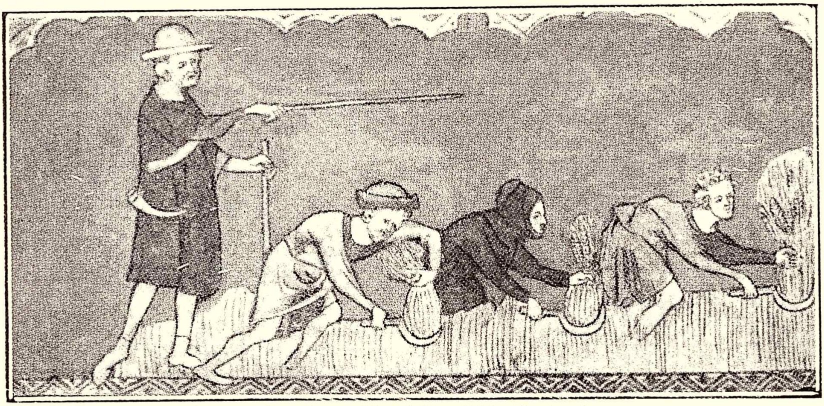


Fig. 41. Reaping with sickle (14th Century).

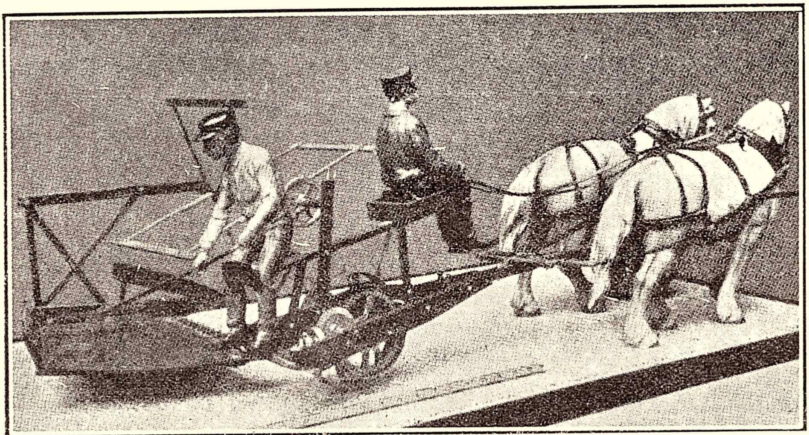


Fig. 42 Model of McCormick's reaper.

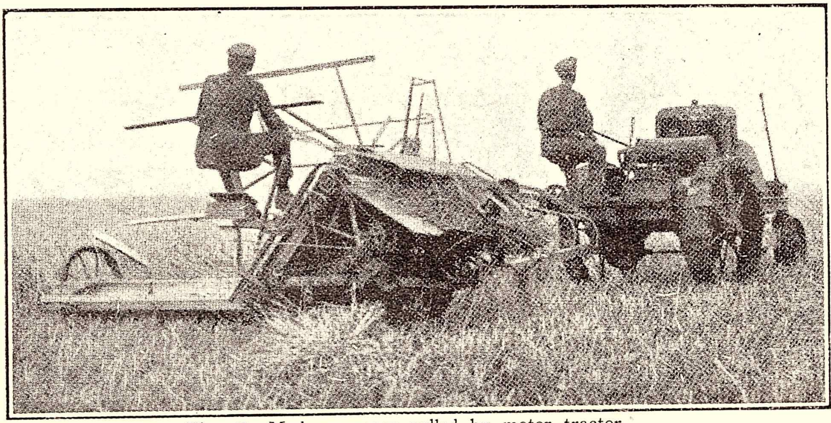


Fig. 43. Modern reaper pulled by motor tractor.
(Above illustrations from **"A Short History of British Agriculture,"** O.U.P.)

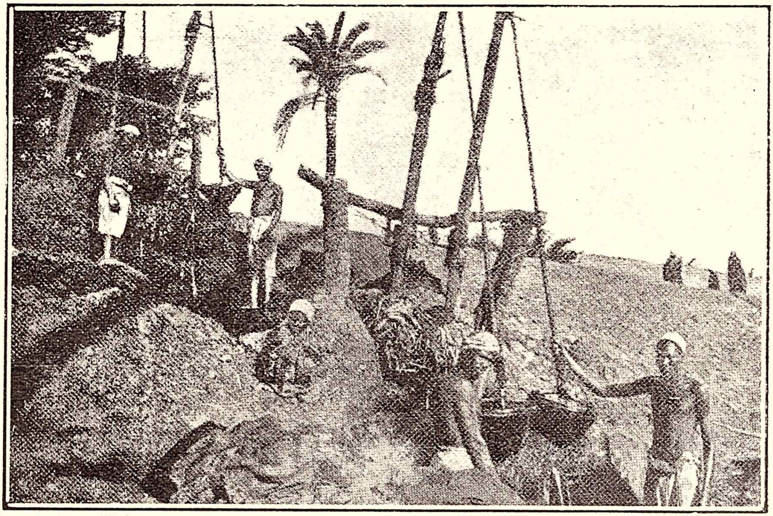


Fig. 44. Using the shaduf to lift water along the Nile. (From "**Kingsway Social Geographies,**" Evans).

Fig. 45. Irrigation in California.

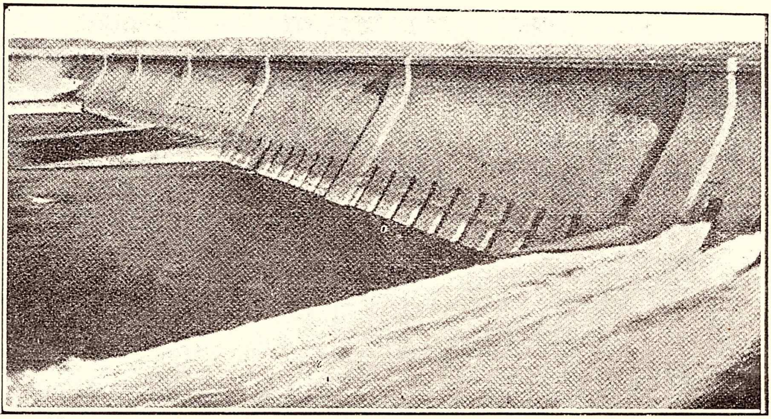


Fig. 46. The Aswan dam. (From "**Kingsway Social Geographies,**" Evans).

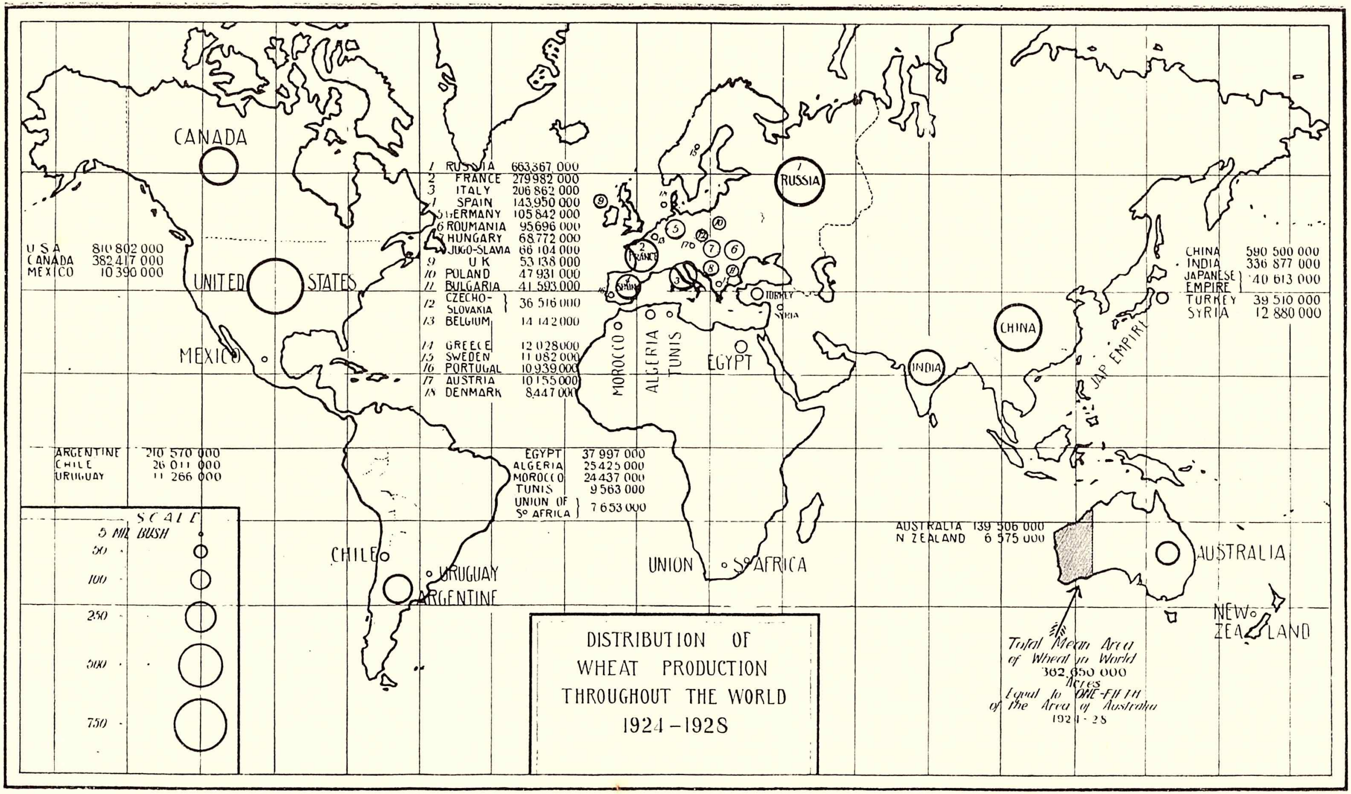

DISTRIBUTION OF WHEAT PRODUCTION THROUGHOUT THE WORLD 1924 – 1928
1 RUSSIA 663,367,000
2 FRANCE 279 982 000
3 ITALY 206 862 000
4 SPAIN 143,950 000
5 GERMANY 105 842 000
6 ROUMANIA 95,696 000
7 HUNGARY 68,772 000
8 JUGO-SLAVIA 66 104 000
9 U K 53 138 000
10 POLAND 47 931 000
11 BULGARIA 41 593 000
12 CZECHO-SLOVAKIA 36 516 000
13 BELGIUM 14 142 000
14 GREECE 12 028 000
15 SWEDEN 11 082 000
16 PORTUGAL 10,939 000
17 AUSTRIA 10 155 000
18 DENMARK 8,447 000
U S A 810 802 000
CANADA 382,417 000
MEXICO 10 390 000
ARGENTINE 210 570 000
CHILE 26 011 000
URUGUAY 11 266 000
EGYPT 37 997 000
ALGERIA 25 425 000
MOROCCO 24 437 000
TUNIS 9 563 000
UNION OF S° AFRICA 7 653 000
CHINA 590 500 000
INDIA 336 877 000
JAPANESE EMPIRE 40 613 000
TURKEY 39 510 000
SYRIA 12 880 000
AUSTRALIA 139 506 000
N ZEALAND 6 575 000
CANADA
UNITED STATES
MEXICO
CHILE
URUGUAY
ARGENTINE
RUSSIA
FRANCE
SPAIN
TURKEY
SYRIA
MOROCCO
ALGERIA
TUNIS
EGYPT
UNION S° AFRICA
CHINA
INDIA
JAP EMPIRE
AUSTRALIA
NEW ZEALAND
SCALE
5 MIL BUSH
50
100
250
500
750
Total Mean Area of Wheat in World 362,650 000 Acres Equal to ONE-FIFTH of the Area of Australia 1924 - 28

Fig. 47.

Growing Rice in Monsoon Lands.

By DR. W. S. DALE.

TALK. June 28—

Last term I spoke to you of people who lived by herding; but this is not the only way in which people procure the necessities of life. This you can easily understand if you stop to think of New Zealand and the many ways our people are occupied. Cultivation of the soil is much more strenuous than herding, and, although you may not, perhaps, realise it, agriculture requires more effort to make it a successful way of living. The result of this is that people have less time for leisure and less time to take up arts and crafts; and so we do not find, as a rule, that the way in which they live is so closely connected with their food, clothes and houses.

The monsoon region of Asia is not the only area where rice is grown, for it is raised also in parts of Australia where the land is able to be irrigated, in Hawaii, and elsewhere. During this talk, however, I want to confine myself to rice cultivation in the monsoon lands.

The monsoon winds which have so much influence on the crops of India, Burma and China (and these are the homelands of the rice plant), blow as dry winds from the north-east from November to March. Then comes a period when there is not a very constant wind. From June to October the south-west monsoon supplies the copious rainfall necessary for the cultivation of rice. But now let us see how rice-growers live as compared with the herders we studied last term.

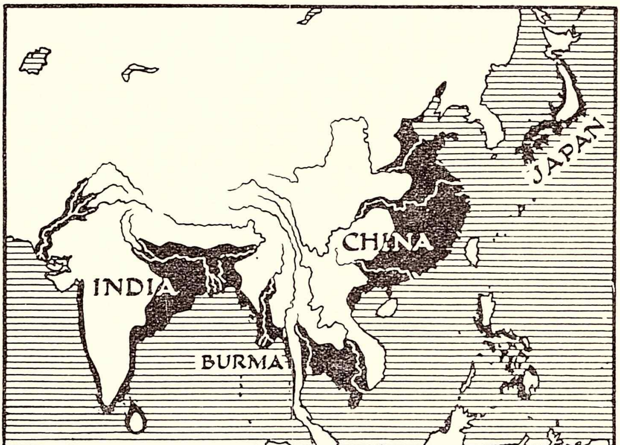


Fig. 48. South-eastern Asia. Rice-producing areas in black. (From "**Kingsway Social Geographies,**" Evans).

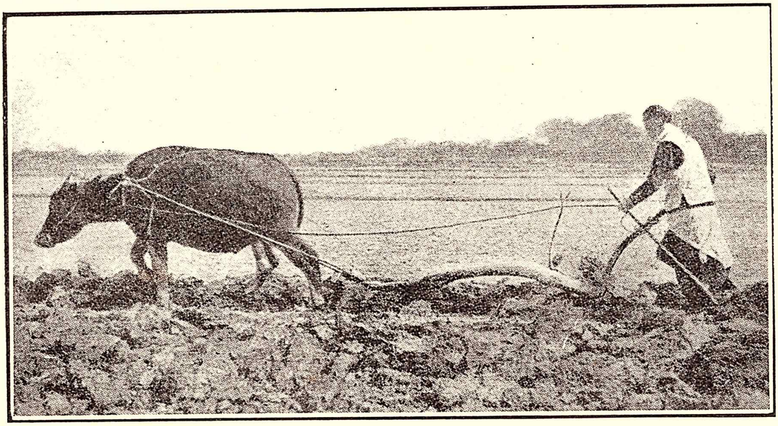


Fig. 49. Ploughing a rice-field, China. (From **"Peoples of All Nations,"** Hammerton).

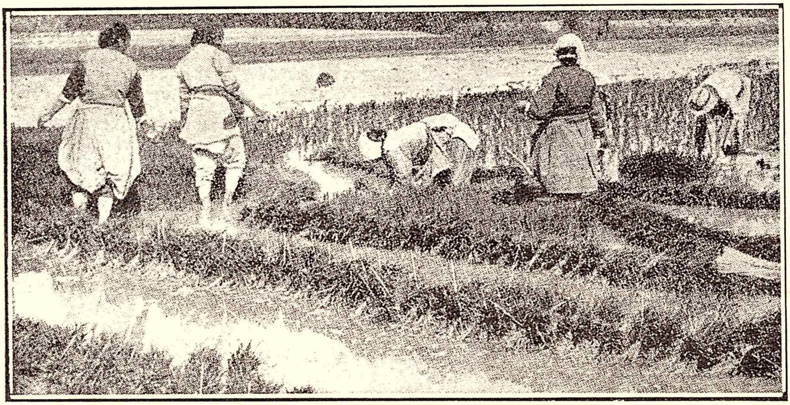


Fig. 50. Transplantation in a Chinese paddy-field. (From **"Peoples of All Nations,"** Hammerton).

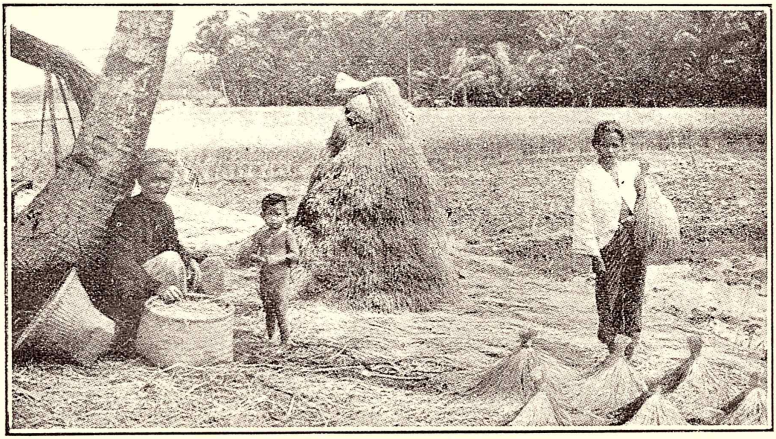


Fig. 51. Stacking sheaves of ripe rice in Java. (From **"Peoples of All Nations,"** Hammerton).

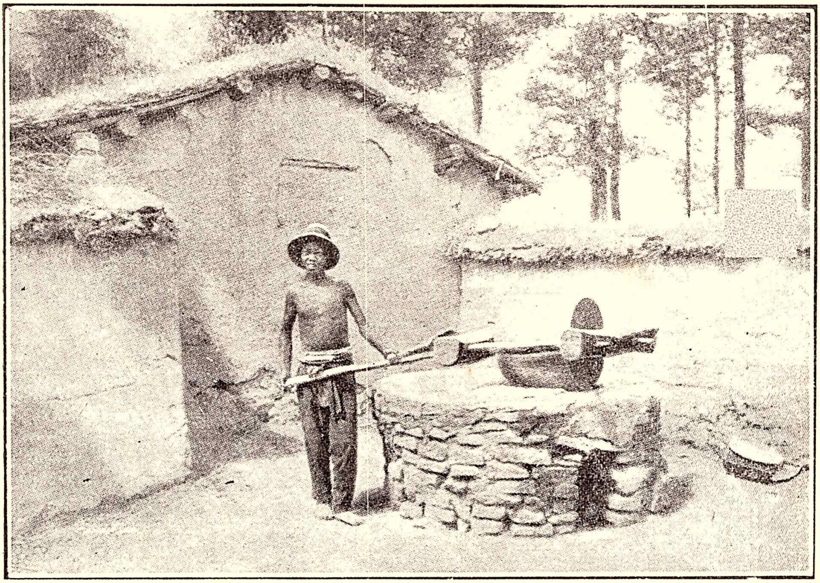


Fig. 52. Crushing the rice, China. (From "**Lands and Peoples,**" Amalgamated Press, London).

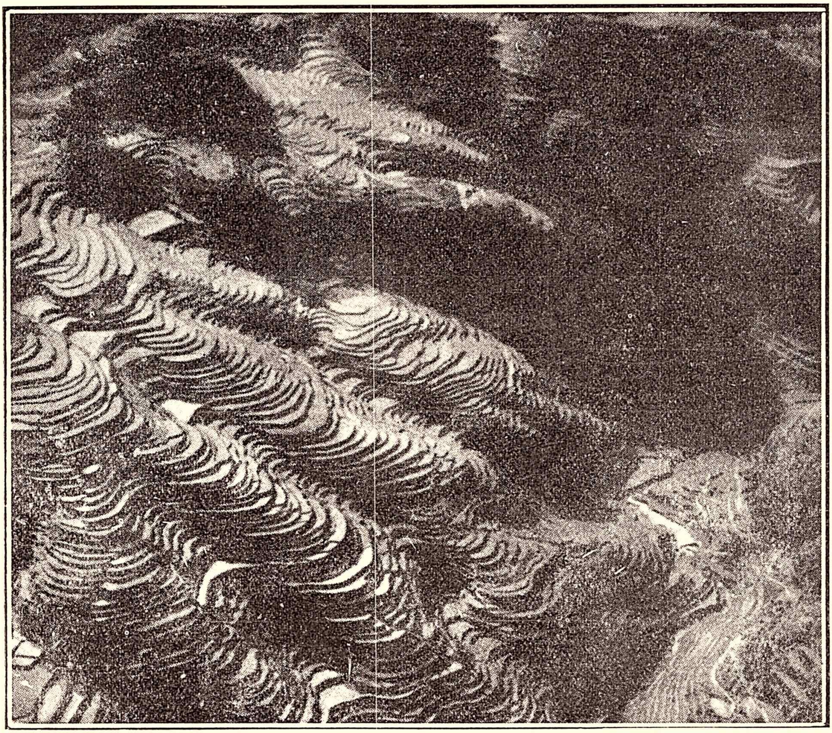
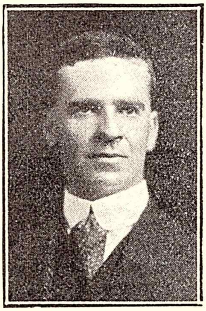


Fig. 53. Rice-fields on terraced mountain sides in Yunnan. (From "**Illustrated London News.**")

The Coconut Palm and its Products.

By MR. E. G. JONES.



Mr. Jones.

TALK. July 5—

See if you can find out:—

1. What products of the coconut palm we use in our homes in New Zealand.

2. What countries these products come from.

3. What copra is, and what it is used for.

4. Why we do not grow coconut palms in New Zealand.

5. Which New Zealand native tree is most like the coconut palm in appearance.

6. How could you get the kernel out of a coconut without breaking the shell.

7. The difference between a coconut and a cocoa pod.

8. What part of a coconut palm besides the nut can be eaten.

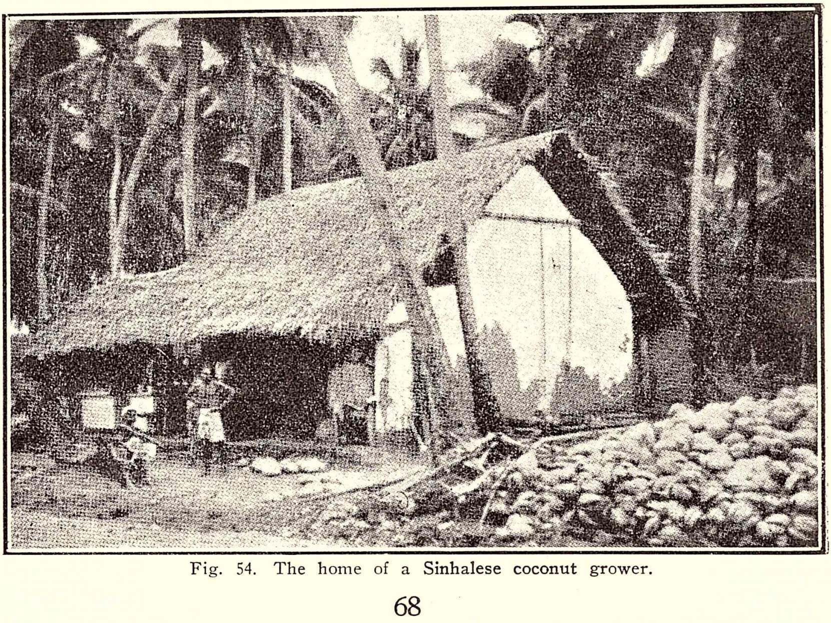


Fig. 54. The home of a Sinhalese coconut grower.

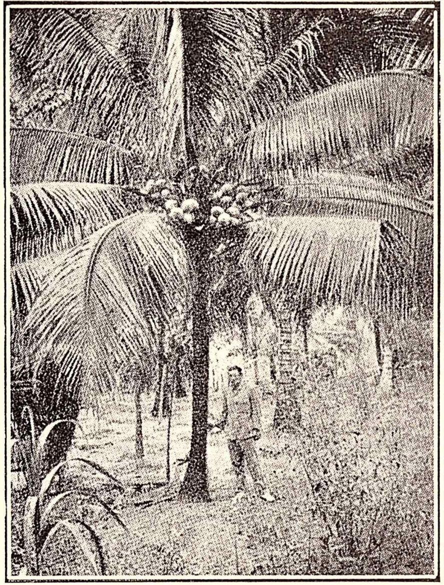


Fig. 55. Coconut palm. (From "**Products of the Empire,**" Clarendon).

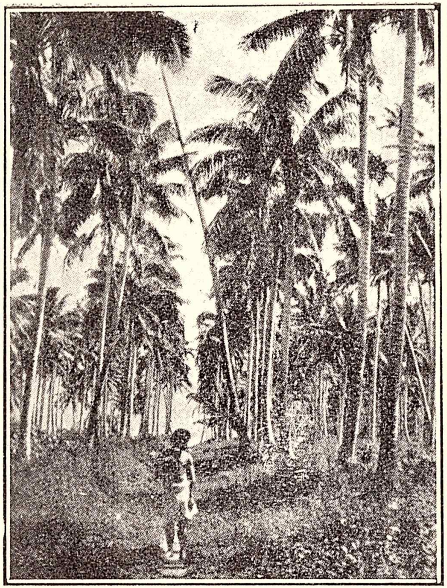


Fig. 56. Plantation of coconut palms in Fiji.

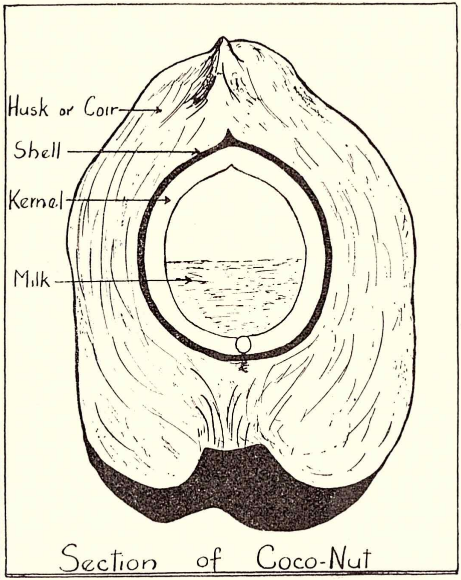


Fig. 57. Section of coconut.

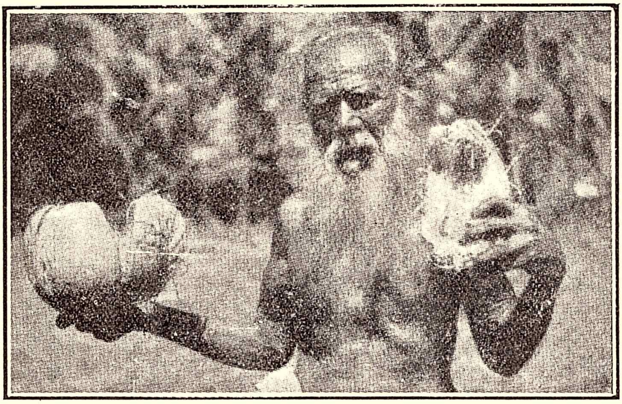


Fig. 58. Breaking open a coconut.

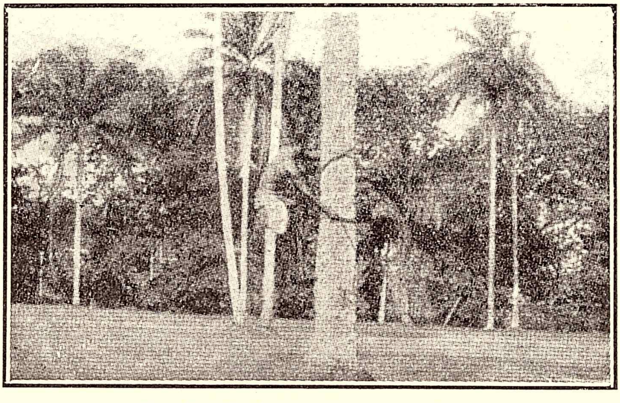


Fig. 59. Climbing the coconut palm.

The Rubber Tree, Rubber, and its Uses.

By MR. E. G. JONES.

TALK. July 12—

With the increased use in recent years of rubber and its products, the cultivation of the rubber tree has developed into a tremendous industry, and there are numerous factories manufacturing all sorts of rubber products. You will be surprised to hear about the many products derived from the juice of the rubber tree. We use a great many of these products in our homes and in our motor cars.

Do you know what synthetic rubber is?

Here are some things for you to do, either before or after the talk:—

1. Mark in on a map of the world (in your atlases perhaps) the countries in which rubber trees are grown. Make sure you mark in Para, a place from which rubber of the best quality comes.

2. Write down a list of twenty articles made from rubber. Do not forget articles made of hardened rubber or vulcanite.

3. Make a simple drawing of a rubber tree to show how the juice of rubber trees is collected ready for manufacture into rubber.

4. Look at a Macintosh overcoat, and find out how the material of which it is made keeps out water, and why it is called a Macintosh.

5. Find out the best way of putting a patch over a puncture in the inner tube of a bicycle or motor car tyre.

6. Make a collection of pictures of the rubber industry. You might start with the pictures in the booklet.

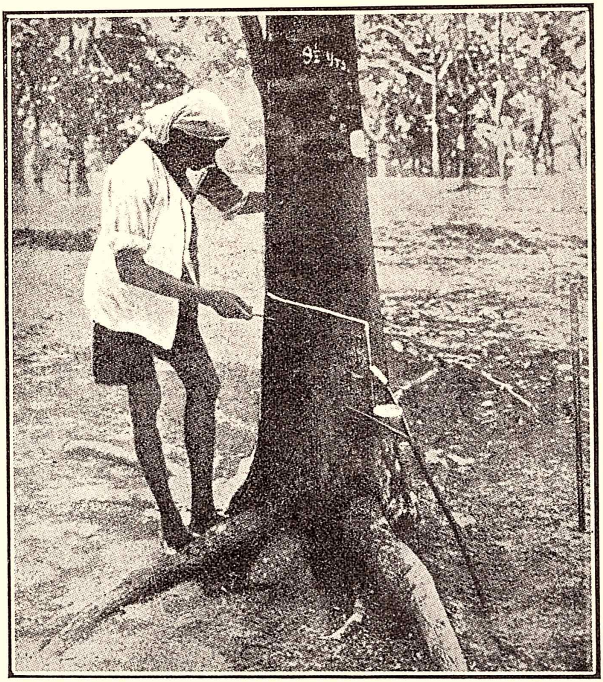


Fig. 60. Tapping rubber tree. (From **"The Crepe Rubber Sole,"** issued by Rubber Growers' Association, London).

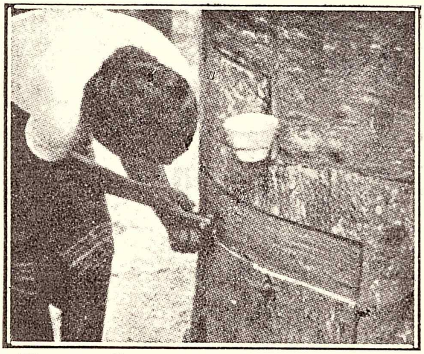


Fig. 61. Close-up of tapped rubber tree.

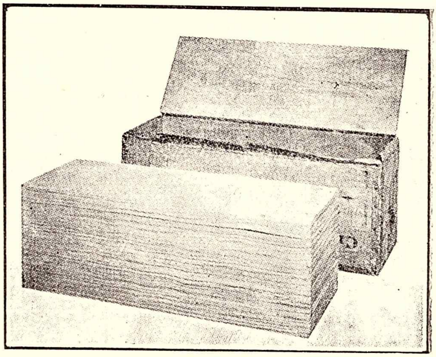


Fig. 62. Sheets of crepe rubber. (From **"The Crepe Rubber Sole,"** issued by Rubber Growers' Association, London**).**

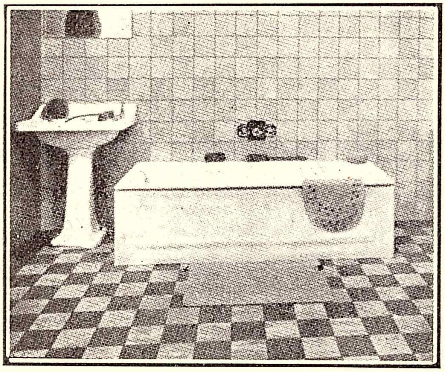


Fig. 63. Bathroom with rubber flooring. (From **"Rubber and Agriculture,"** issued by Rubber Growers' Association, London).

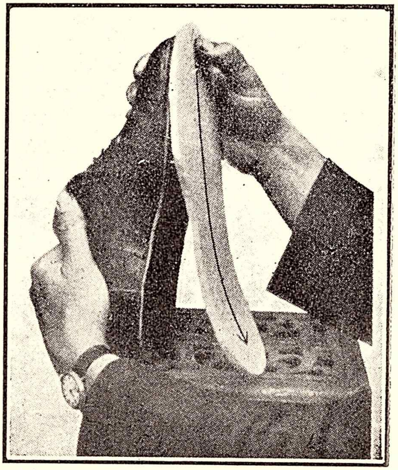


Fig. 64. Fitting crepe rubber sole on shoe. (From **"The Crepe Rubber Sole,"** issued by Rubber Growers' Association, London.

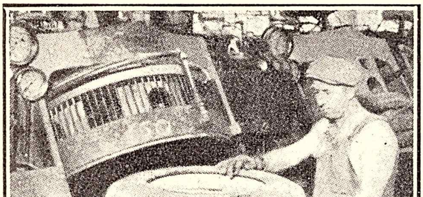


Fig. 65. Tyre of raw rubber and cotton being placed in mould.

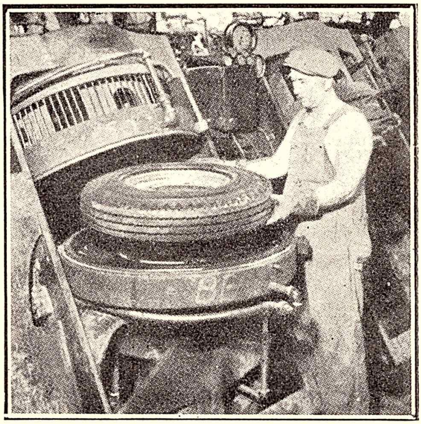


Fig. 66. Tyre being taken from mould after curing.

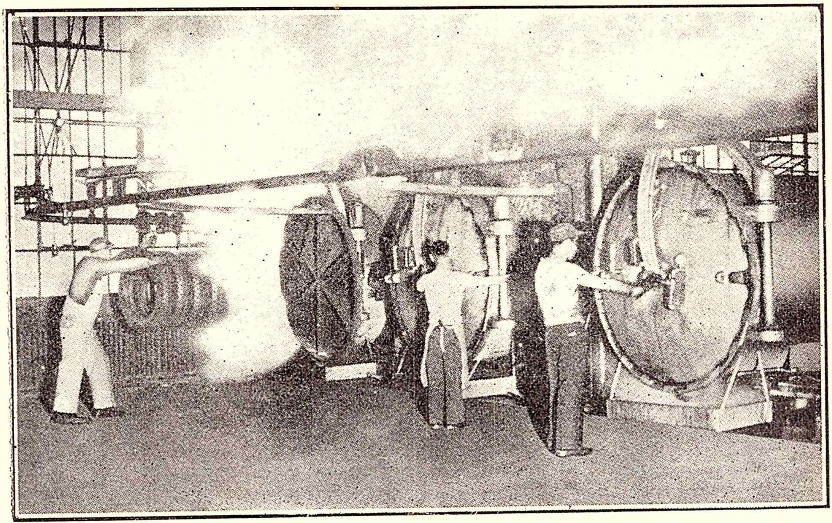


Fig. 67. Vulcanizing tyres.

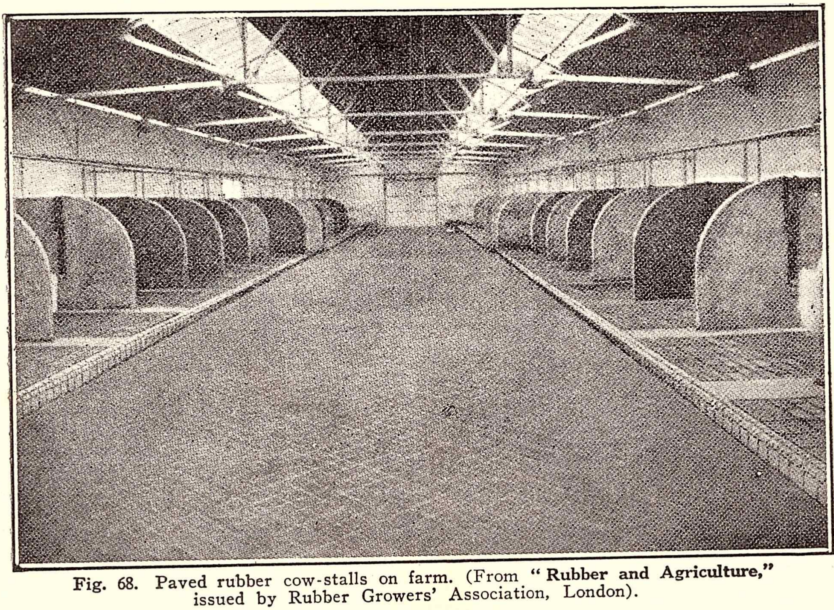


Fig. 68. Paved rubber cow-stalls on farm. (From "**Rubber and Agriculture,**" issued by Rubber Growers' Association, London).

Tea, Coffee and Cocoa.

By DR. W. S. DALE.

TALK. July 19—

In continuation of our talks on cultivators, this week we are going to learn something about the growing of three important beverages. The talk will involve us in a wide trip to-day, so hold tight while our magic carpet whirls us swiftly through the air, first to south-eastern Asia, to Assam, a mountainous country to the north-east of India. Here, where the wild tea plant was found in 1834, was established the first British tea plantation. On such plantations the labour is carried on by coloured people under the direction of white men. You will notice at once that this is one of the main differences between the rice grower and the native of Africa, who grows cocoa. But not all the labourers who work on the tea plantations are Assamese. Workers come from all over India to work in the tea gardens, and they will, after a few years' work, return to their own native villages with the wages they have saved at work in Assam. The tea plant needs the kind of heat and the amount of water usual in monsoon lands, but it is injured if water is allowed to stand about the roots. For this reason it is always grown on sloping land where the water can run off easily.

Now slip back on to the carpet and take, with me, a bird's-eye view of the west coast of Africa—the Gold Coast of Nigeria. Within the last fifty years these lands have so developed the cocoa tree that to-day they supply nearly one-half of the world's cocoa beans. Here the native families grow and tend the trees for themselves, only meeting the white man when they have a crop to sell. When the time comes for transportation it is sent by rail or motor truck to one of the ports on the coast. Sometimes, however, there is neither rail nor road for transportation; then the natives make the beans up in parcels and carry them on their heads. Because of the *tse-tse* fly neither horse nor bullock can live in this part of Africa, and so the natives have to carry goods to and from the remote parts themselves.

If we wish to see the coffee plant being cultivated let us get back on to the magic carpet again. This time we go to the New World—to the south-east corner of Brazil, in South America. There below us, in a haze of smoke, lies the beautiful harbour of Rio. But what is the smoke that drifts up to us? It is pungent as it reaches our nostrils and makes us cough as we inhale the fumes. Ah! yes, the burning coffee which is being destroyed because there are too many trees and the world does not buy enough berries to use it all up, that is the reason! Millions of sacks of coffee are being burnt each year by the Brazilian Government to keep the price of coffee at a reasonable level. And what a sight greets our eyes! The land rises from the coast to the plateau, and here, on the steep sides of the hills, set in the reddish soil, are millions of coffee trees. They have been planted out from the nurseries, where they were raised in wicker baskets; and now, after four years, they are a mass of berried fruit. Let us get down and learn more about these cherry-like berries.

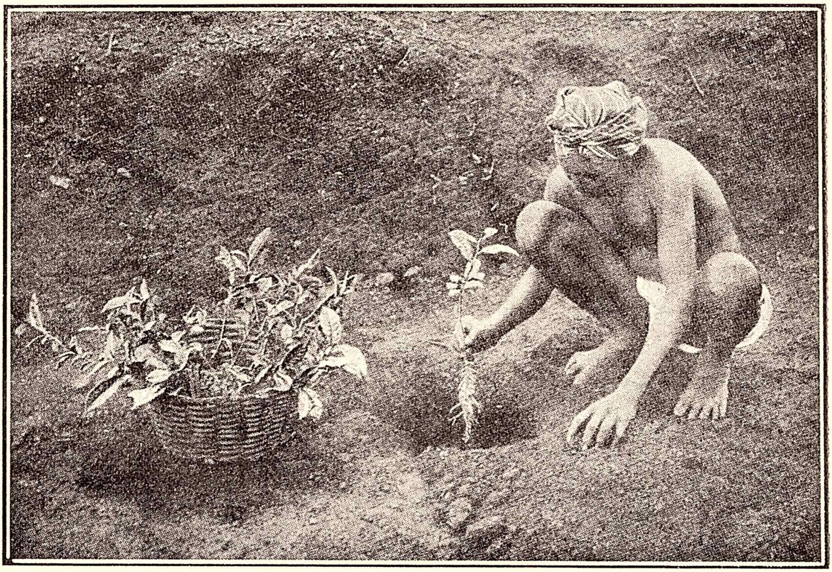


Fig. 69. Planting out young tea plants in Ceylon. (From **"Lands and Peoples,"** Amalgamated Press, London).

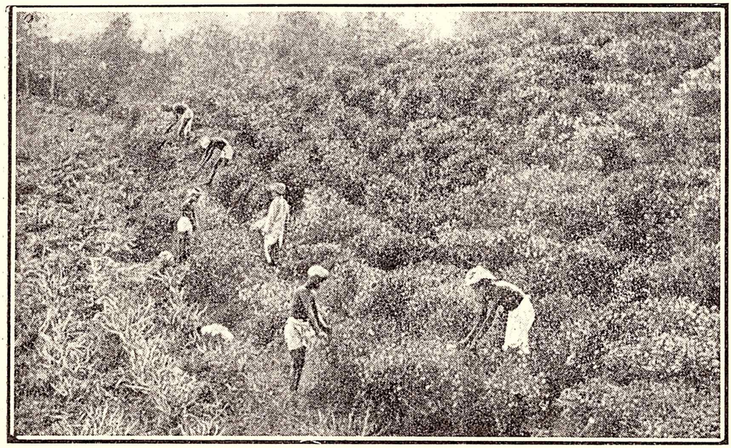


Fig. 70. Pruning tea shrubs, Ceylon. (From "**Lands and Peoples,**" Amalgamated Press, London).

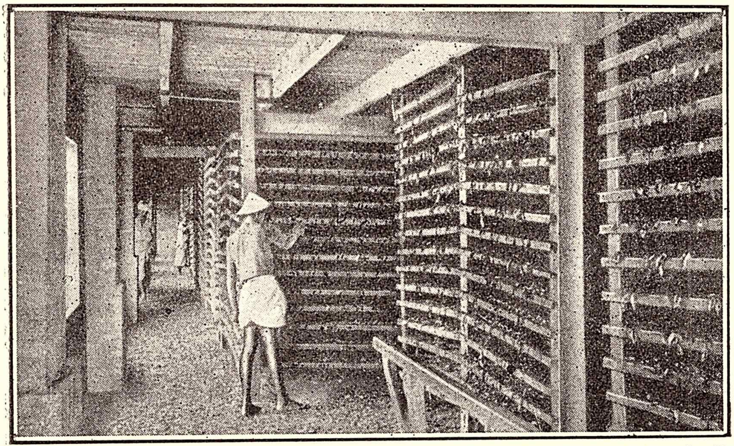


Fig. 71. Fresh green leaves placed to wither. (From "**Lands and Peoples,**" Amalgamated Press, London).

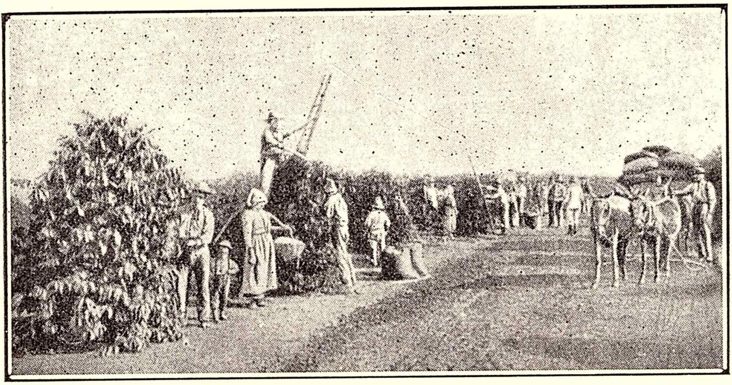


Fig. 72. Harvesting the coffee berry. (From "**Peoples of All Nations,**" Hammerton).

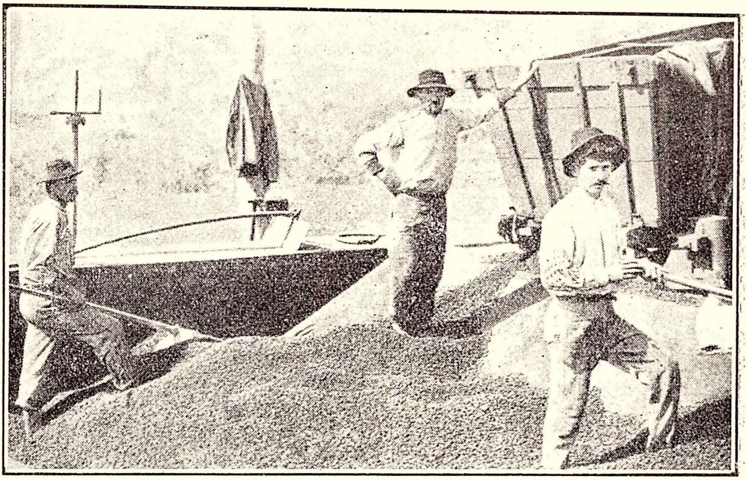


Fig. 73. Coffee berries fresh from the field. (From "**Peoples of All Nations,**" Hammerton).

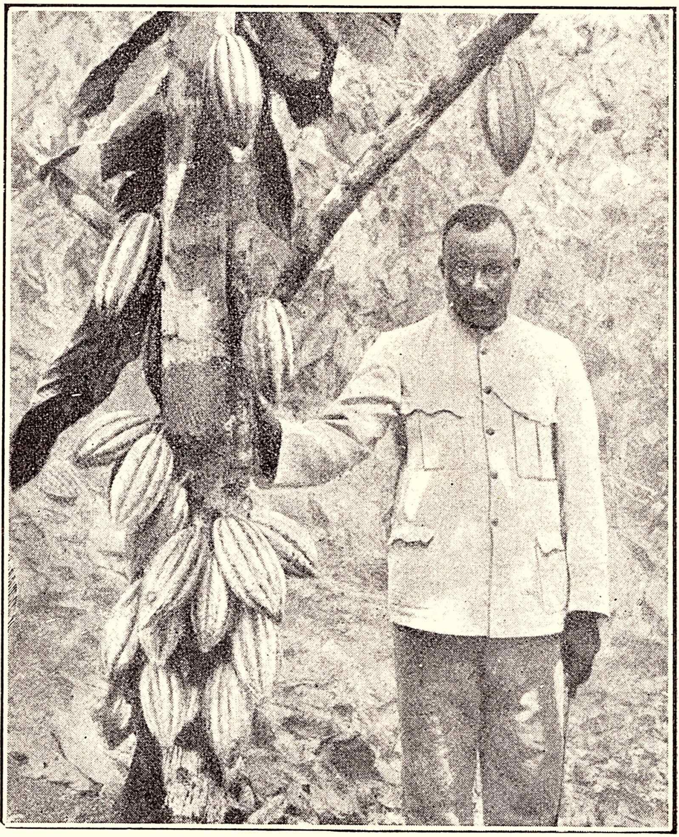


Fig. 74. Cocoa tree, Trinidad, showing pods. (From "**Peoples of All Nations,**" Hammerton).

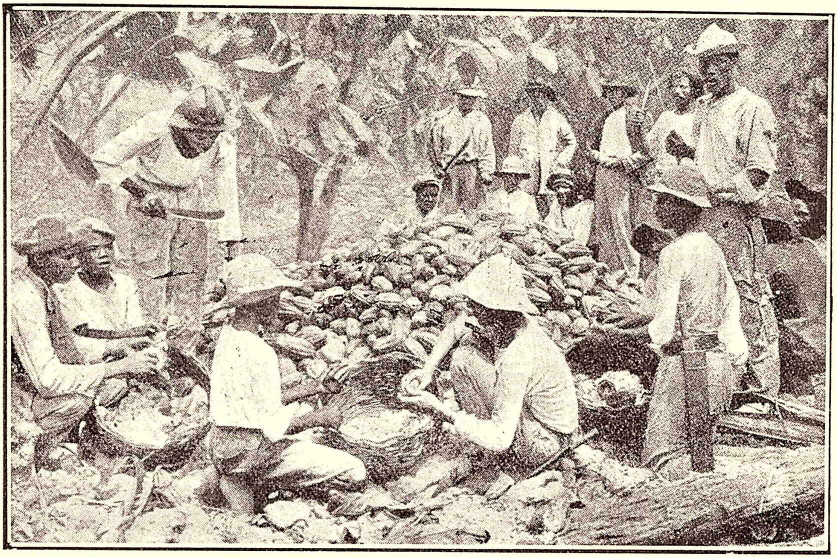


Fig. 75. Opening cocoa pods, West Indies. (From **"Lands and Peoples,"** Amalgamated Press, London).

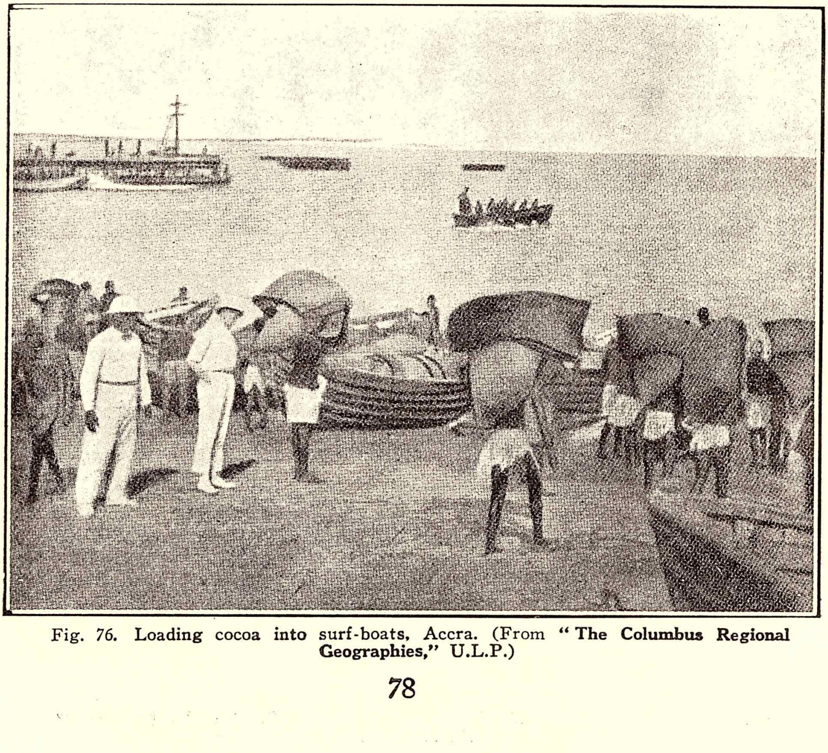


Fig. 76. Loading cocoa into surf-boats, Accra. (From **"The Columbus Regional Geographies,"** U.L.P.)

The World's Cotton Supplies.

By DR. W. S. DALE.

TALK. July 26—

If you did not look at the title of this talk and I told you that men tilled the soil to get material for clothes you would probably think I was joking; but, if you stop to think for a moment how much we use cotton in everyday life, you will see just what I mean. Cotton garments are even more important to people living in hot lands than they are to us, for they do not need to wear clothes made from any other material. The fine threads that go to make a bolt of calico are made from a plant that grows in countries that have long, hot summers and a considerable amount of rain. The United States, Egypt and India are the chief cotton-producing countries, but the two latter have to depend on irrigation for watering the crop. It is a strange thing that it cannot be grown if the temperature falls just a little below freezing point, for then it is killed. Cotton can, therefore, be cultivated only where the summers are long enough for the seed to be planted, the plants set out and the crop harvested before the first frosts of the autumn make themselves felt.

One of the most suitable places in the world for the raising of cotton is in the south-eastern corner of the United States, and I select this as the place to talk about this afternoon. In the cotton-belt nearly all the work is done by Negroes. Natives of Africa, imported for work as slaves in the first place, these people now work as labourers on the estates of white men, or work small farms for a white landlord. If they work as " tenant-farmers " their landlord supplies them with manure, mules, a plough, and the seed. When the crop is picked and sold the labourers receive a share of the money from the sale of the cotton. Quite often this is but a poor reward for the long hours of work the crop requires, and the man, with his family, is scarcely able to make ends meet until the next season comes round. In spite of this, however, they seem to be quite happy, for to see them walking home in the cool of the evening, dark shadows on the road, singing and laughing, no one would believe their life to be as hard as it is.

When picking time comes round everyone is tremendously busy—children stay away from school, old folks make an effort to pick a part of the crop of bolls, as the bursting pod is called, and work goes on from early morning till late in the evening. Soon the railway yards begin to tell us that cotton is picked; stacked in piles are the bursting bales of cotton heads. Each bale is wrapped in a sort of scrim covering, about one-sixth the size of our wool bale and weighing about 200 lbs. To keep it from bursting three iron hoops are clamped round, and soon it is all carted away to the sales. Presently it appears as shirts for us, as pareus for the Tahitian, sheets for the Canadian, or linings for the suits of the Frenchman. What a useful thing the Negro produces!

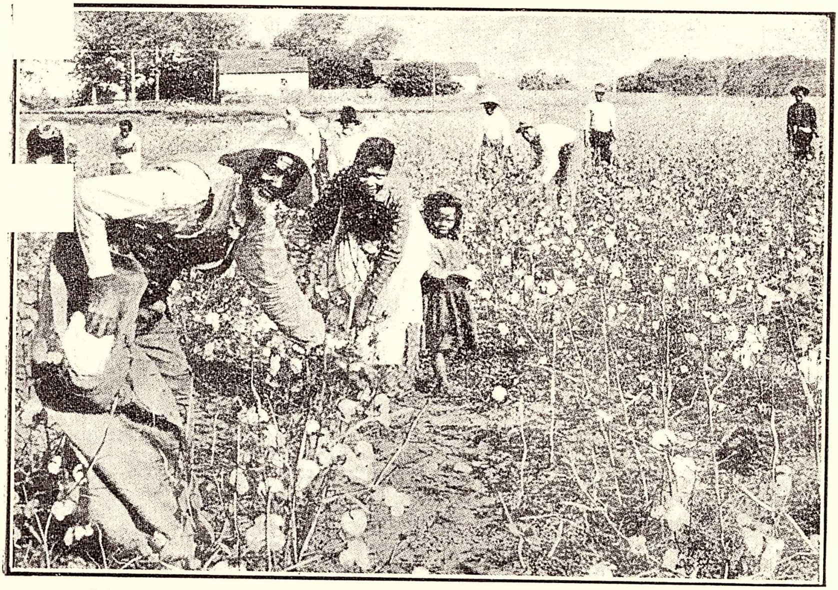
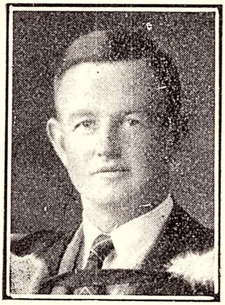


Fig. 77. Picking cotton in Southern U.S.A. (From "**Lands and Peoples,**" Amalgamated Press, London).

Coal and Iron in the World To-day.

By MR. R. A. SCOBIE.



Mr. Scobie.

TALK 1. September 13—

BEFORE THE TALK.

1. Collect various pieces of coal to see if they can tell about their origin.

2. Make a list of places to which you have seen coal being taken. For what is the coal used?

3. Make a list of any other uses for which you know coal is used.

4. Collect all the pictures you can of mines and miners.

OUTLINE OF TALK.

1. Brief history of man's fuel supply.
2. Formation of coal and its distribution.
3. Mining.

AFTER THE TALK.

1. Make a model of a coal mine. Paper cut-outs, clay, or plasticine will do.

2. What is meant by calling coal-mining " a robber industry "?

3. Find out all you can of Davy and his safety lamp. You can make a model by placing a gauze cone over a lighted candle on a base of damp clay. Test by pouring coal gas on the gauze.

4. What is meant by " black diamonds " and " white coal."

5. Visit a mine.

Will teachers please have a physical map of the world ready for the talks on coal, iron, steel and ships.

TALK 2. September 20—

This talk consists of two parts. The first half describes how modern man uses the coal he extracts from the earth's storehouse. The other half introduces us to the Iron Age and shows the very simple beginnings of a metal on which our civilisation depends.

USES OF COAL.

(a) Power supply.

(b) Modern coal products.

(c) Smelting.

IRON.

(a) A primitive smelter.

(b) The location of the world's iron-fields.

THINGS TO DO.

1. To make gas simply fill a clay pipe with pieces of coal, seal the bowl, and heat. Apply a match to the tube.

2. Make a list of all the substances we get from coal.

3. By listing all the places from which your ironware comes, you can find out the chief iron countries of the world.

4. Find out how to make a casting. Iron is too hard to melt easily. Use lead instead.

5. Pay a call at the local gas-works.

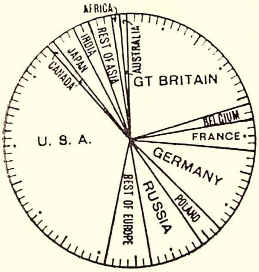


Fig. 78. World production of coal, 1931-5. Total 1,035 millions of tons. (From **" A Commercial Geography,"** Longman's).

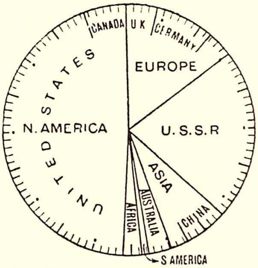


Fig. 79. Coal reserves of the world. (From **" A Commercial Geography,"** Longmans).

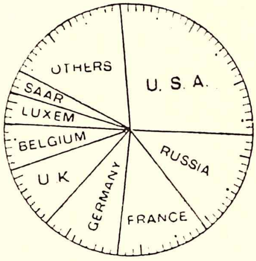


Fig. 80. Iron - producing countries of the world, 1933. Total, 49 millions of tons. (From **" A Commercial Geography,"** Longmans).

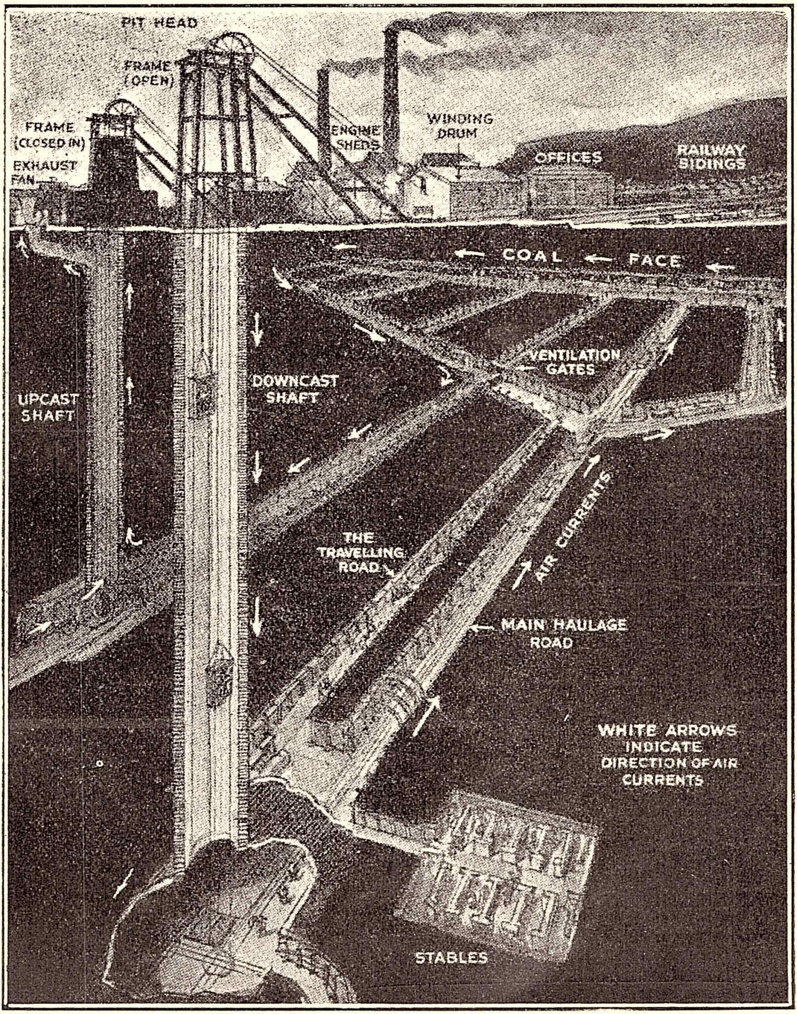


Fig. 81. Section through coal-mine, showing pit buildings and machinery, and workings underground. (From **" The Kingsway Social Geographies,"** Evans).

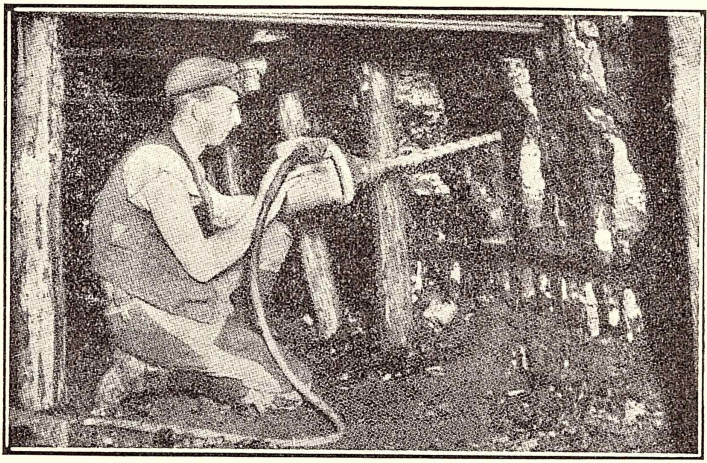


Fig. 82. Coal-miner boring holes for blasting. (From **"The Kingsway Social Geographies,"** Evans).

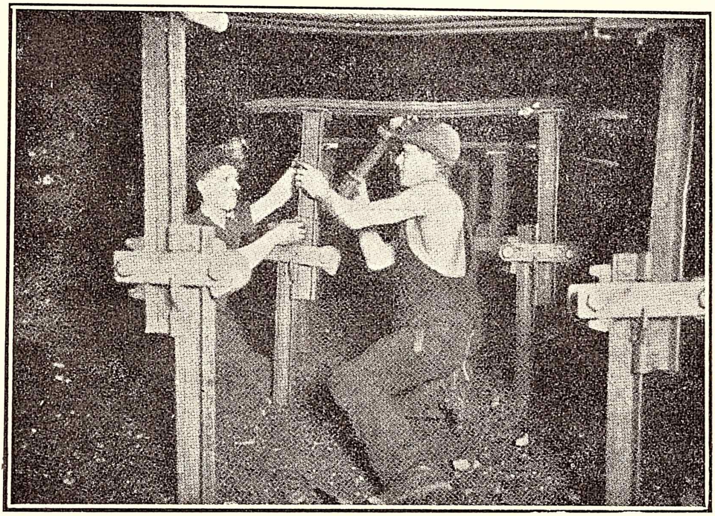


Fig. 83. Steel props being set to support roof in coal-mine. (From **"The Kingsway Social Geographies,"** Evans).

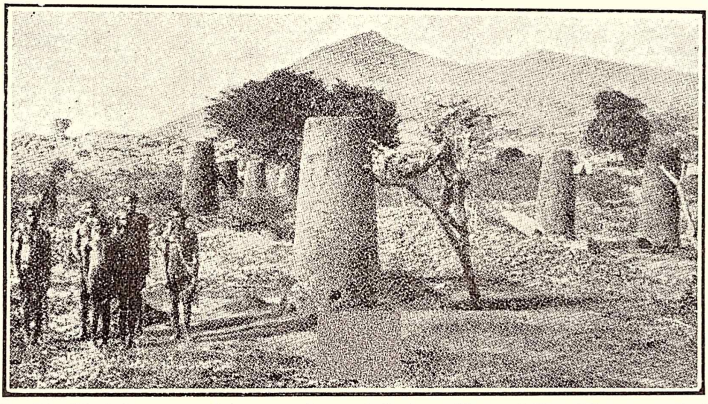


Fig. 84. Mud furnaces of iron smelters of Sudan. (From **"The Kingsway Social Geographies,"** Evans).

Making Steel.

By Mr. R. A. Scobie.

TALK. September 27—

Outline of Talk.

(a) The modern iron maker and his blast furnace.

(b) " Steeling " the iron into extremely hard and sometimes rustless metal.

Things To Do.

1. In many big towns are foundries, where you can see a blast furnace in action.

2. What is: (a) pig iron; (b) wrought iron; (c) steel.

3. New Zealand gets much of its steel from Australia. Where in Australia do they get the iron ore, the limestone for purifying, and the coal for smelting? Why is the steel industry conducted on the coalfield and not in the places where they obtain the iron ore or limestone?

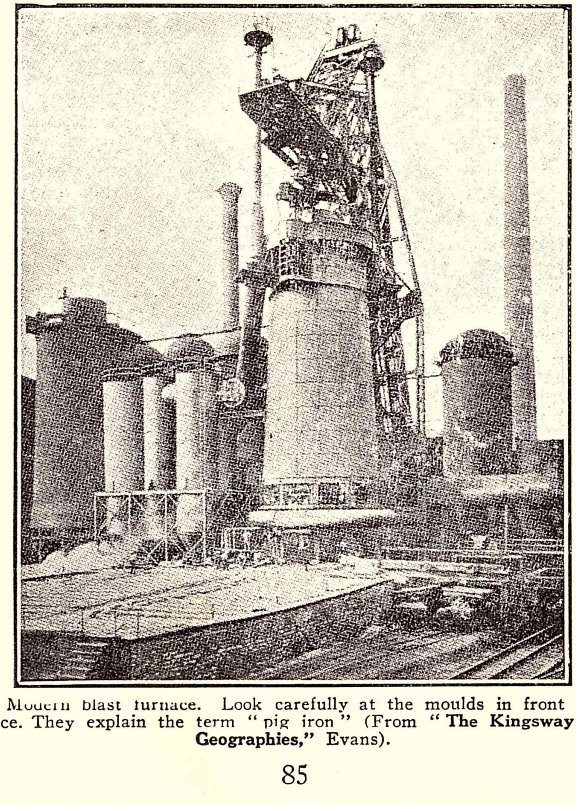


Fig. 85. Modern blast furnace. Look carefully at the moulds in front of base of furnace. They explain the term " pig iron " (From **" The Kingsway Social Geographies,"** Evans).

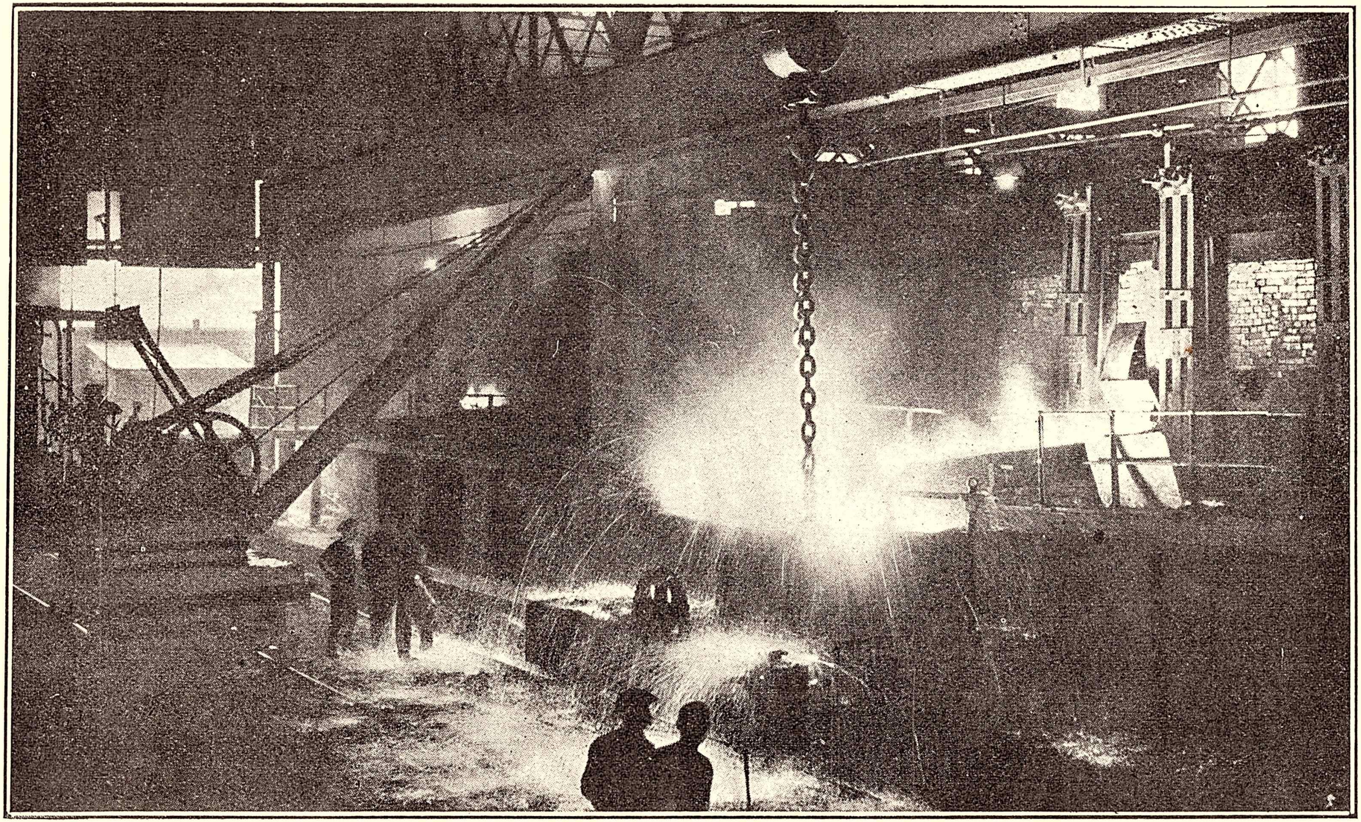


Fig. 86. Tapping a steel furnace. (From "**Pictorial Education,**" Evans).

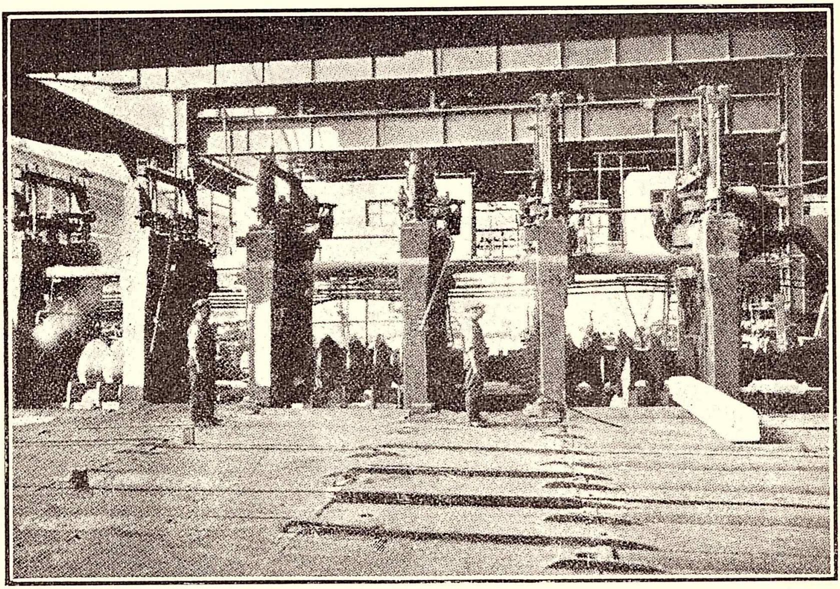


Fig. 87. Rolling a steel ingot. (From "**The Kingsway Social Geographies,**" Evans).

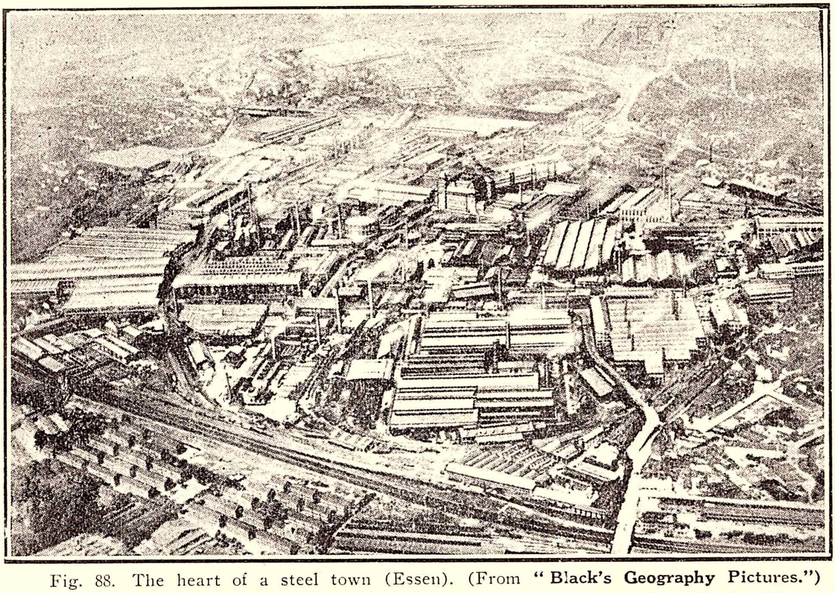


Fig. 88. The heart of a steel town (Essen). (From "**Black's Geography Pictures.**")

The British Ship-building Industry.

By Mr. R. A. Scobie.

TALK. October 4—

Things To Do.

1. Have a picture of the *Queen Mary* ready for the talk.

2. Make a collection of boat pictures. See what flag each flies.

3. Make a list of the kinds of people needed to fit out a modern liner. Why are they called "liners"?

4. The wharves can tell you much about modern boats.

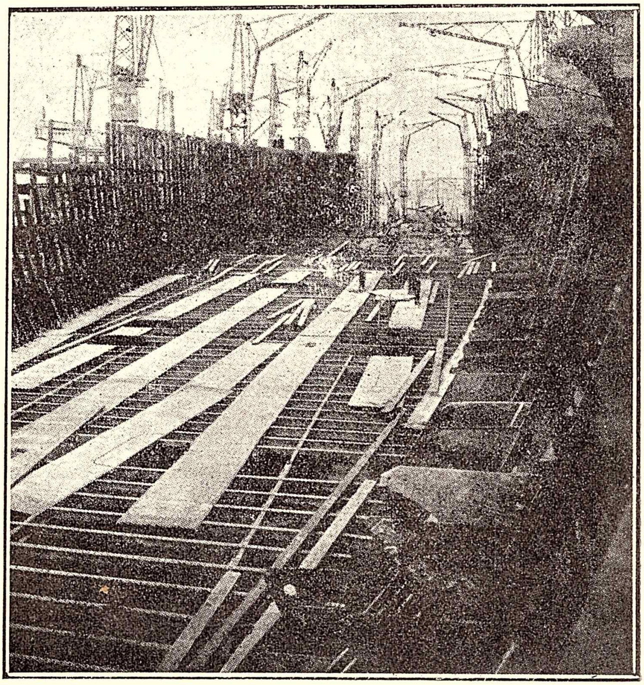


Fig. 89. Ribs for a mammoth. (From "**Pictorial Education,**" Evans).

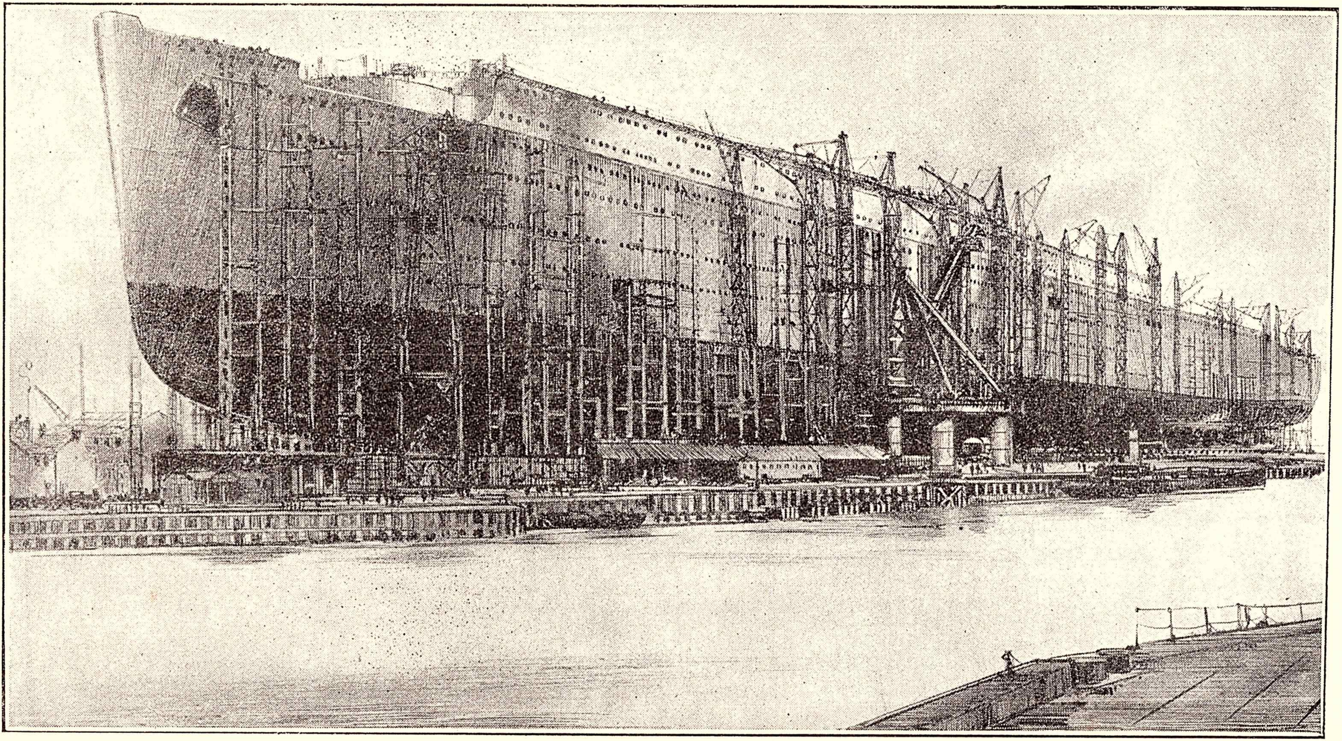


Fig. 90. A masterpiece in the making. (By courtesy of the Cunard-White Star Company).

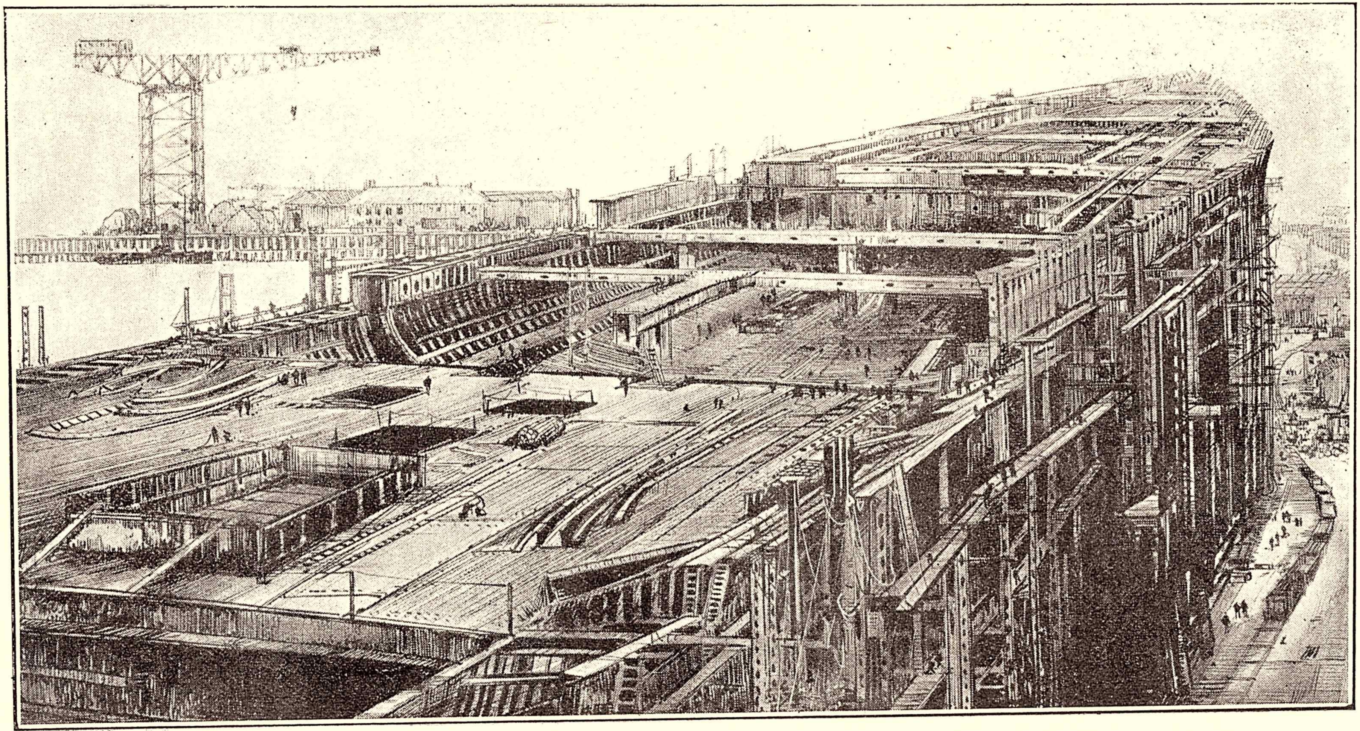


Fig. 91. Steep steel cliffs. (By courtesy of the Cunard-White Star Company).

Power.

By DR. W. S. DALE.

TALK. October 11—

So far this year we have made a study of how people wrest a living from the land. We have looked at white man, brown man and black man in his work and in his play. Now we shall turn to those things that he finds necessary to assist him to live more easily. Strange though it is, the development of help in working and living also gives employment to many hundreds of people. And, just as we have seen a difference in the way in which people in various parts of the world live, although they seem to be doing much the same sort of work, so, also do we see, in different countries a difference of ideas about power. First then consider what we mean by power. It is the force which makes machines work. The machine may be a cart, or just a collection of levers, pulleys and ropes, but, if there is nothing to make them go then they are useless to man. The first power to be used was human force, the strength of the human body. It was this that the Egyptians used to transport, lift, and use generally, in building the pyramids; the same power, assisted by rollers, was used by the Maoris to take the canoes from the bush to the water, and, as I said last term, the same power is used by the natives of the remote districts of Nigeria to move goods from place to place even to-day. In the East, as well as in Egypt, man-power is used to irrigate the land, but you can easily see that the puny strength of a man, or even of ten men, is not to be compared with the energy of animals trained to work together, nor can it be compared with the strength of the wind, or, as Watt discovered, with the strength of steam. To-day man has discovered a new strength, a fresh form of power, namely water-power. The development of this power had a very humble beginning. At first all man did was to let the water run over, or pass under, a paddle-wheel and so drive it round. By such means man ground his wheat, and, in the early days of iron-working in England, the iron-masters worked their bellows and their heavy hammers by this means. But you must not think that such power has passed away entirely from our lives. In hilly countries, such as Norway, where there are small but swiftly-moving streams in the forest country, the water is still used in the same manner to work circular saws for cutting up tree trunks into suitable lengths. Moreover, water is so much better for man's needs than most other forms of power. Men may fall sick, animals may not always be sufficiently reliable, wind may not always blow, but streams, as a rule, flow all the year round. Climate is really the only thing that affects them, if it is too cold they are liable to freeze (but then men do not live in such parts if they can avoid it), or they dry up if it is too hot and there is not a reasonable rainfall (but who cares to live in a desert?) To-day man places much faith in " white coal," as water-power is called, and New Zealand in common with many other countries is doing all that can be done to use her water supplies to develop hydro-electric power. Coal and oil are being steadily used up, but there is an endless supply of power in the running streams of the world. Moreover, we are coming to depend more and more on the switch as a source of power in our homes and our factories. Let me tell you something about this development of power.

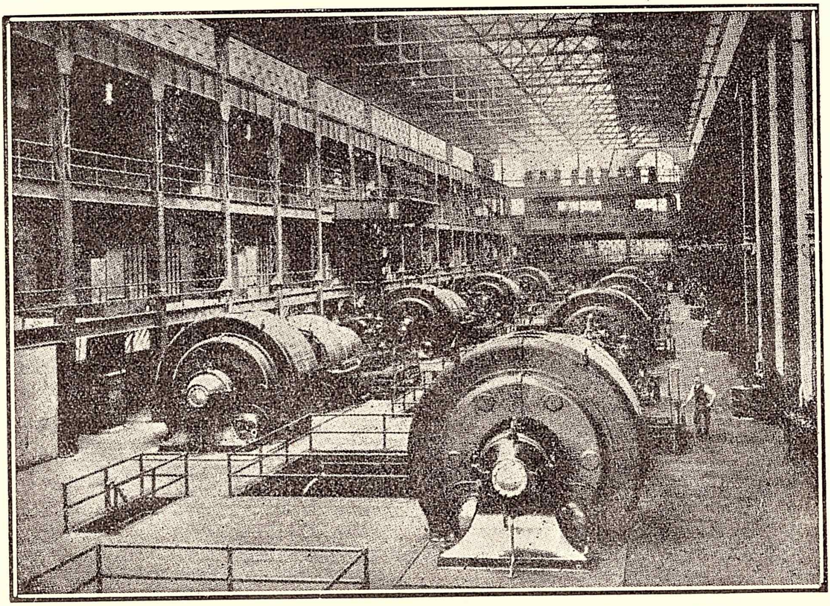


Fig. 92. Interior of a power station. (From " **The Outline of Science,**" Thomson).

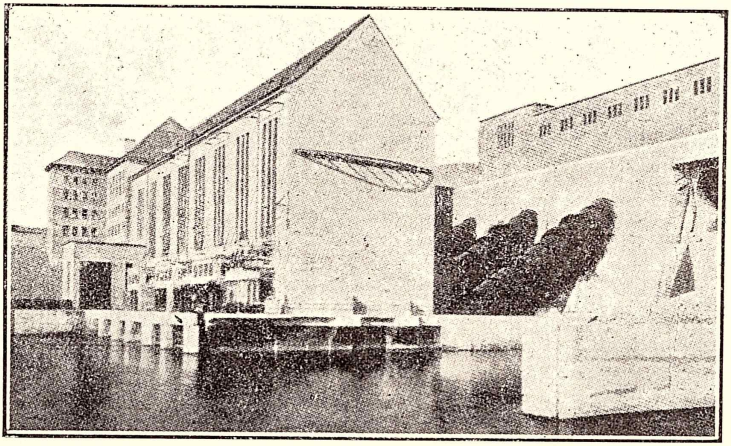


Fig. 93. A typical power station, Shannon, Ireland. (From **"The Columbus Regional Geographies,"** U.L.P.)

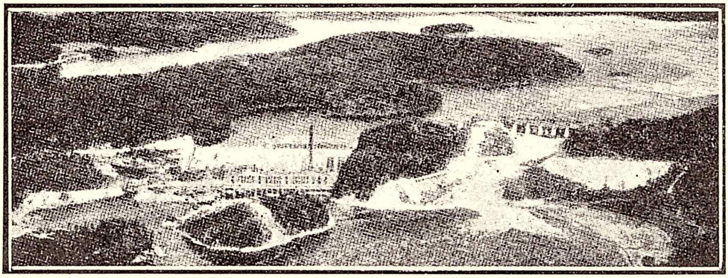


Fig. 94. View of power scheme, Sativeon River, Quebec. (From **"The Columbus Regional Geographies,"** U.L.P.)

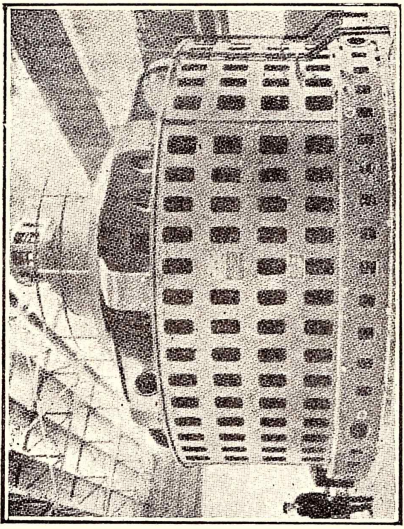


Fig. 95. A 12,000-volt generator. (From **"The Nation at Work,"** Harrap).

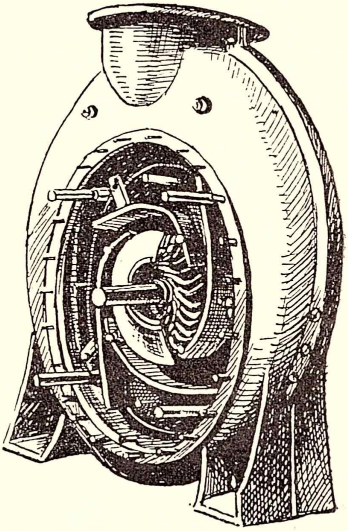


Fig. 96. Interior of a double-vortex turbine. (From **"The Book of Invention,"** Harrap).

Petroleum.

By DR. W. S. DALE.

TALK. October 18—

Have you ever thought how badly off we should be if for some reason or another the supply of petroleum ceased? The last century was perhaps the Age of Coal, but as you realise from my last talk this is the Age of Electricity and Petroleum. Without petroleum we should have no petrol for our motor cars and buses, no oil for our ocean-going liners, no thick oils for the running of machinery, no grease, and no kerosene for the lamps of the world. There would be no aeroplane service, nor would the farmer be able to run his gas engine to help him on the farm. But yet this does not mean that we have only now discovered petroleum; it was known thousands of years ago, before the discovery of the uses for coal, but it was not until about 1850 that chemists found out how to utilise the new liquid. At first man merely used the oil from springs where it oozed to the surface. Later on he found out that there were large supplies in the earth that could be got by digging wells. To-day, so urgent is the need for oil, people all over the world are seeking more and more for likely places to dig wells to supply our needs. Petroleum itself is a close relation to coal, for it is found deep down in the earth and has been formed by the decay of plants that lived millions of years ago. It has accumulated between two layers of rock through which it cannot soak, and, unless it can force a way through the upper rock layer, has to wait until man comes along to pierce the sheet and allow it to escape. Sometimes it is necessary to pump it out of the well. In this state it is a dark, thick, sticky liquid, so that before it can be used it has to be refined. During the process of refining many useful products are obtained, but I will tell you about these in my talk.

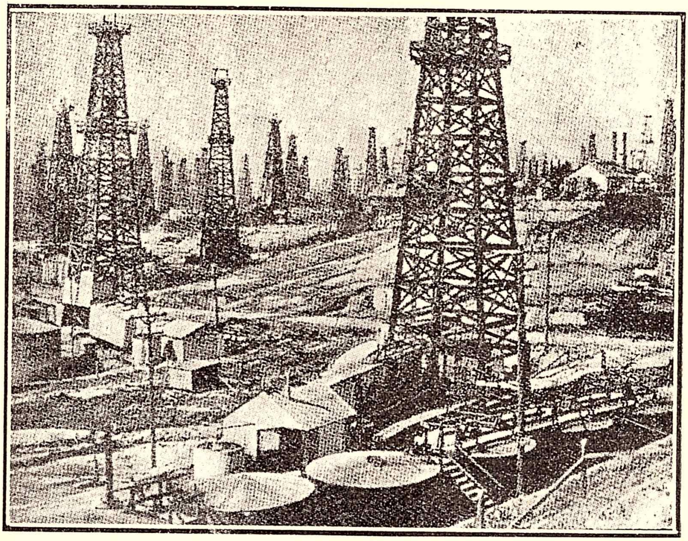


Fig. 97. An oil-field. (From "**Pictorial Education,**" Evans).

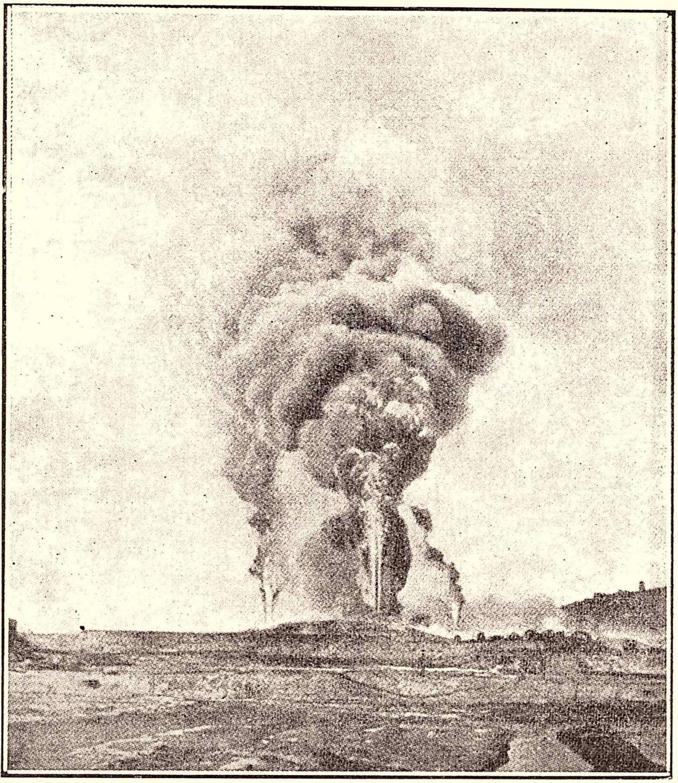


Fig. 98. Petroleum gushing up from the earth, Baku wells. (From "**The Outline of Science,**" Thomson).

Textile Industries.

By DR. W. S. DALE.

TALK. October 25—

It seems a big step in time from the Old Stone Age to modern days, doesn't it? And yet, strange to say, it is not nearly so great as we sometimes think. Have you ever examined closely the flax cloth from which the Maori made his garments? Or have you compared the way he wove the cloak of the 19th Century with the cloaks made by a sewing machine to-day? The advance that we have made is along lines of mechanical control, that is to say, we have been able to invent machinery that will do what the Stone Age Man did with threads, but that will do it quicker, more neatly, and more cheaply than did our ancestors. Moreover, to-day we have machinery that will weave silk, wool, cotton, jute, coco-nut fibre, linen and flax, all of which the modern world uses for clothing or furnishing. But that is anticipating. What is a textile? It is merely a material that has been woven, and, as you will immediately see, it would not be possible for me to tell you about all the textiles so that I must confine myself to telling you of one form of weaving. First, let me tell you about the change that has taken place in the weaving system, and, if time permits, we shall take a quick trip through a couple of factories. You must not think that England is the only place where textiles are made, for they come also from U.S.A. (Massachusetts, Georgia and Alabama), Flanders, Saxony, China, Japan, Ireland (Ulster), France (Lille and Rouen), India (Bombay). If you are interested in this talk you will, perhaps, be able to make a list of the different kinds of textiles that these areas send all over the world.

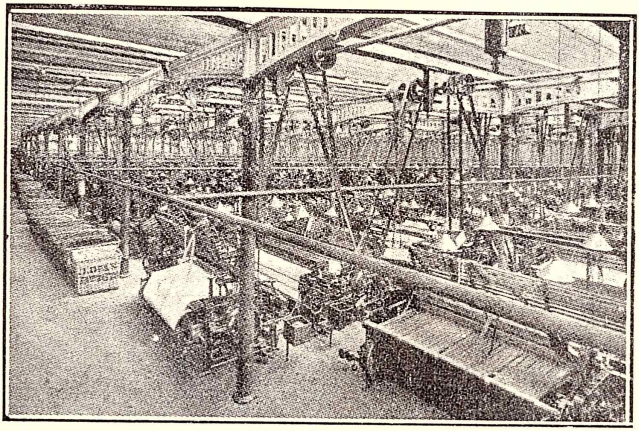


Fig. 99. Lancashire weaving shed. Note stretched warp threads; and way power is supplied to machines. (From **"Some Famous Inventors,"** U.L.P.)

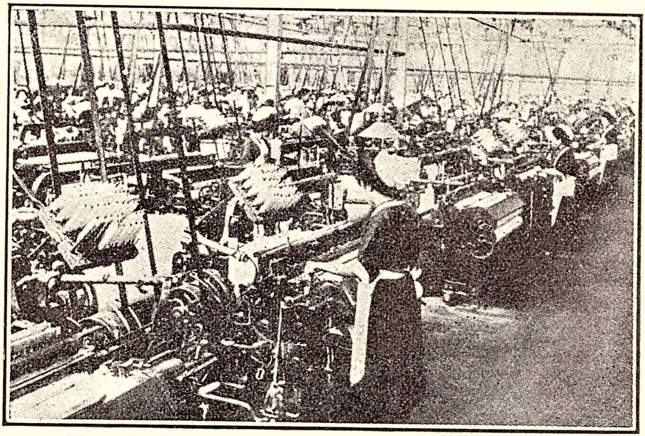


Fig. 100. Japanese cotton factory. (From **"Fortune."**)

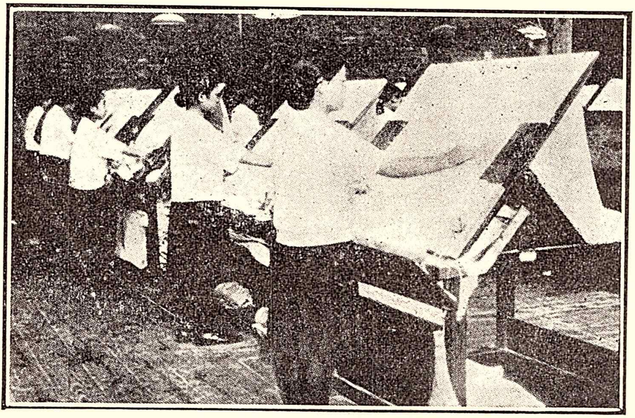


Fig. 101. Picking over the cotton cloth for broken threads or foreign bodies in a Japanese cotton factory. (From **"Fortune."**)

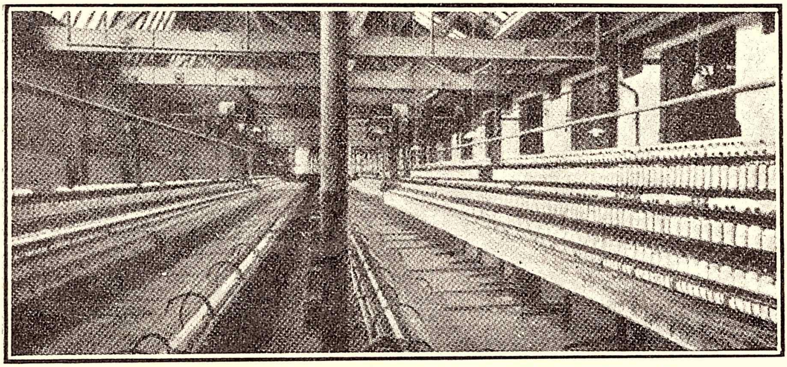


Fig. 102. Interior of a Lancashire mule-spinning shed. (From **"Some Famous Inventors,"** U.L.P.)

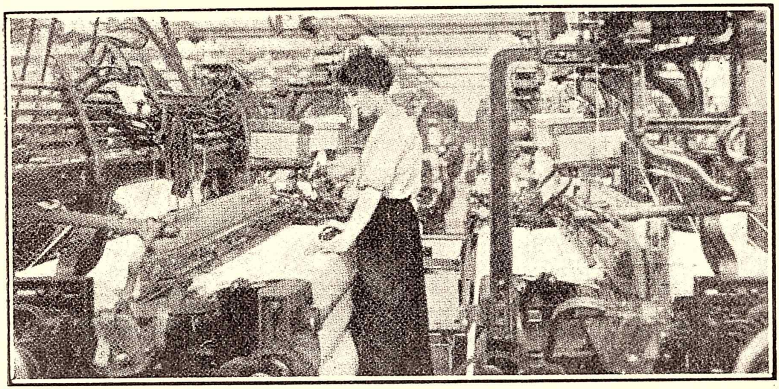


Fig. 103. Weaving machine in Yorkshire woollen mill. (From **"The Nation at Work,"** Harrap).

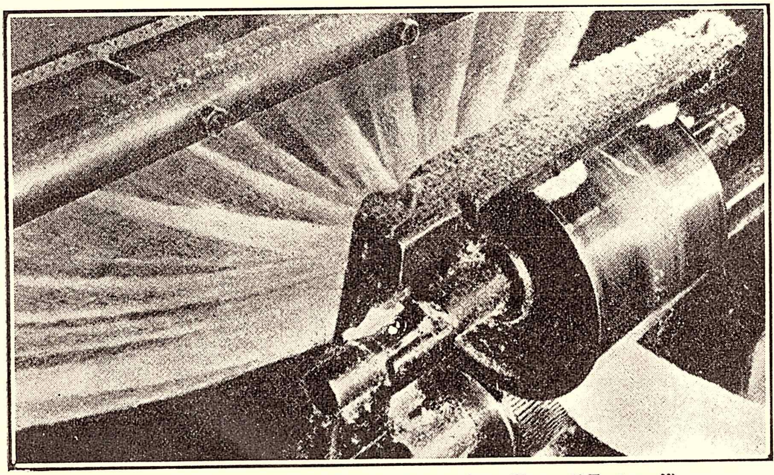


Fig. 104. The wool as it leaves the carder. (From **"Fortune."**)

Silk.

By DR. W. S. DALE.

TALK. November 1—

Most boys and girls have kept silkworms at some time or other, but few, I think, have realised that man uses animals, plants and caterpillars to provide him with materials for textiles. Really, the silkworm is not a worm at all but a caterpillar, and the silk it produces is the cocoon of this tiny creature. Each cocoon contains about a-quarter of a mile of the finest silk-thread, which has to be unwound before it can be made use of in a silk cloth factory. This fibre takes time to reel off and can only be done by keeping the thread quite moist. This is necessary because there is a kind of gum which covers the thin filament, and warm water keeps it soft enough for it to be unwound without being broken. But silk cannot be produced in any country at all, for the food of the silkworm (the mulberry leaf) will grow only in certain parts of the world. Another thing to remember is that much of the work must be done by hand, so that to make a profit from silkworms, labour must be cheap and the people must be able to live cheaply. The chief silk-producing countries are China, Japan, Italy, Turkey and Southern France, and because most of the raw silk is woven in the country that grows it these countries export a good deal of manufactured silk. Some raw silk, does, nevertheless, find its way to England (Macclesfield, Coventry and Derby). In addition to the genuine article the factories of the Continent and U.S.A. are now making artificial silk, called rayon, and it is very doubtful whether, of all the inventions of this modern age, man has done anything more clever than to make steel machinery " eat " spruce and pine wood pulp, and to " spin " the sticky dark-brown liquid into beautiful " silk" fibre. The result is a cheaper and more brilliant piece of cloth, but it lacks one quality that the little worm's product has—it is not so warm as real silk. This afternoon I should like to tell you of both real and artificial silk.

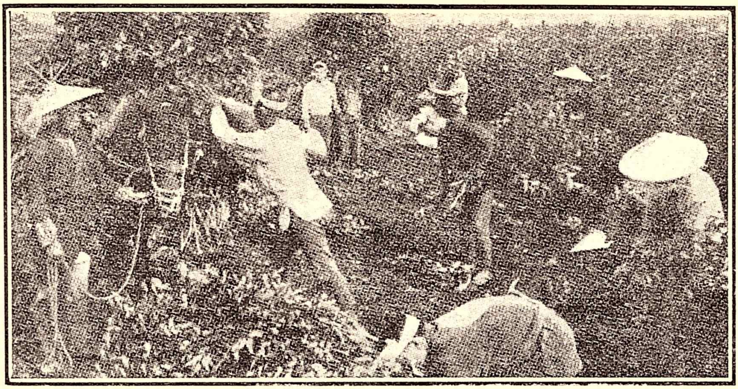


Fig. 105. Mulberry leaves being gathered to feed silkworms, China. (From **"Real Life Geography,"** Gill).

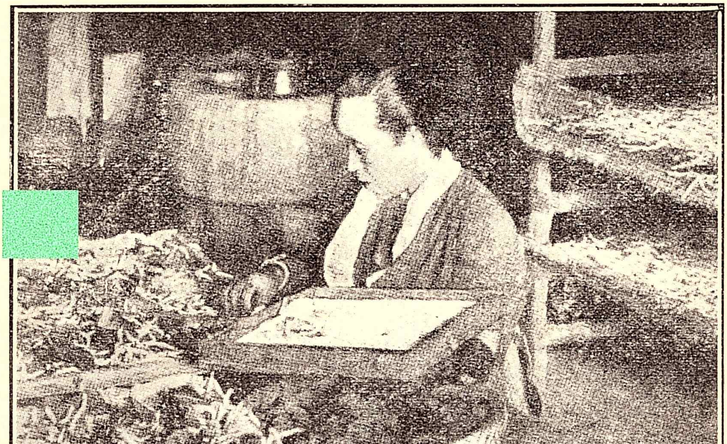


Fig. 106. Feeding silkworms in a Japanese home. (From **"The Columbus Regional Geographies,"** U.L.P.)

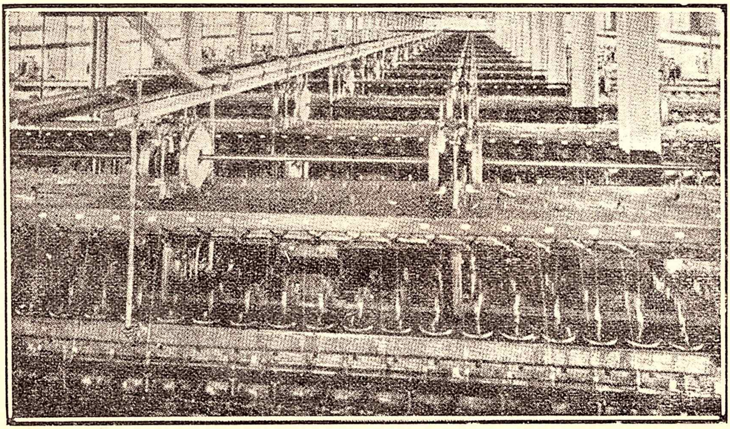


Fig. 107. Artificial silk-spinning machines. (From **"The Nation at Work,"** Harrap).